DRUG & COSMETIC INDUSTRY

DECEMBER, 1950

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THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
MAX FRANKEL, Art Director

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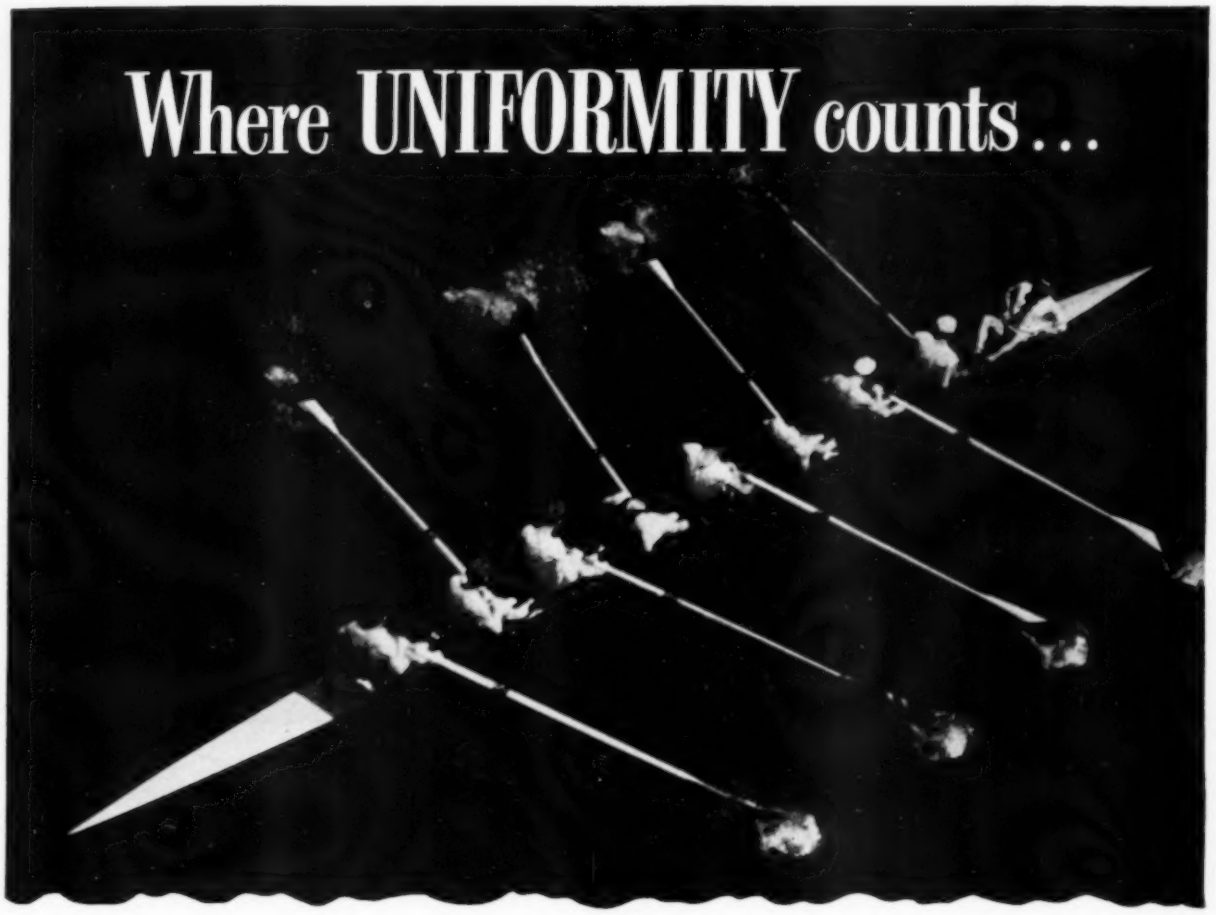

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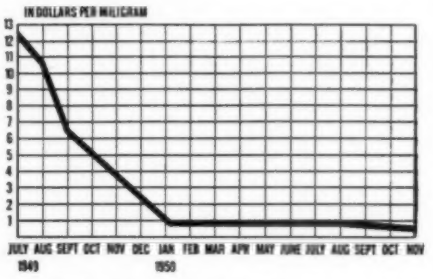

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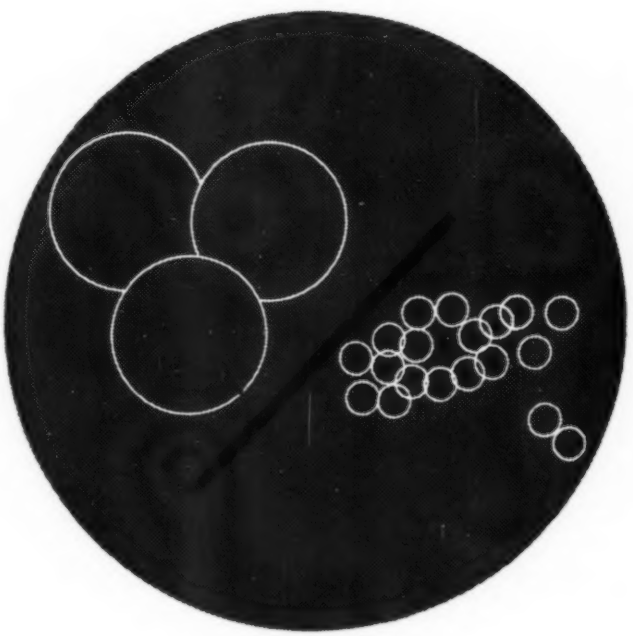

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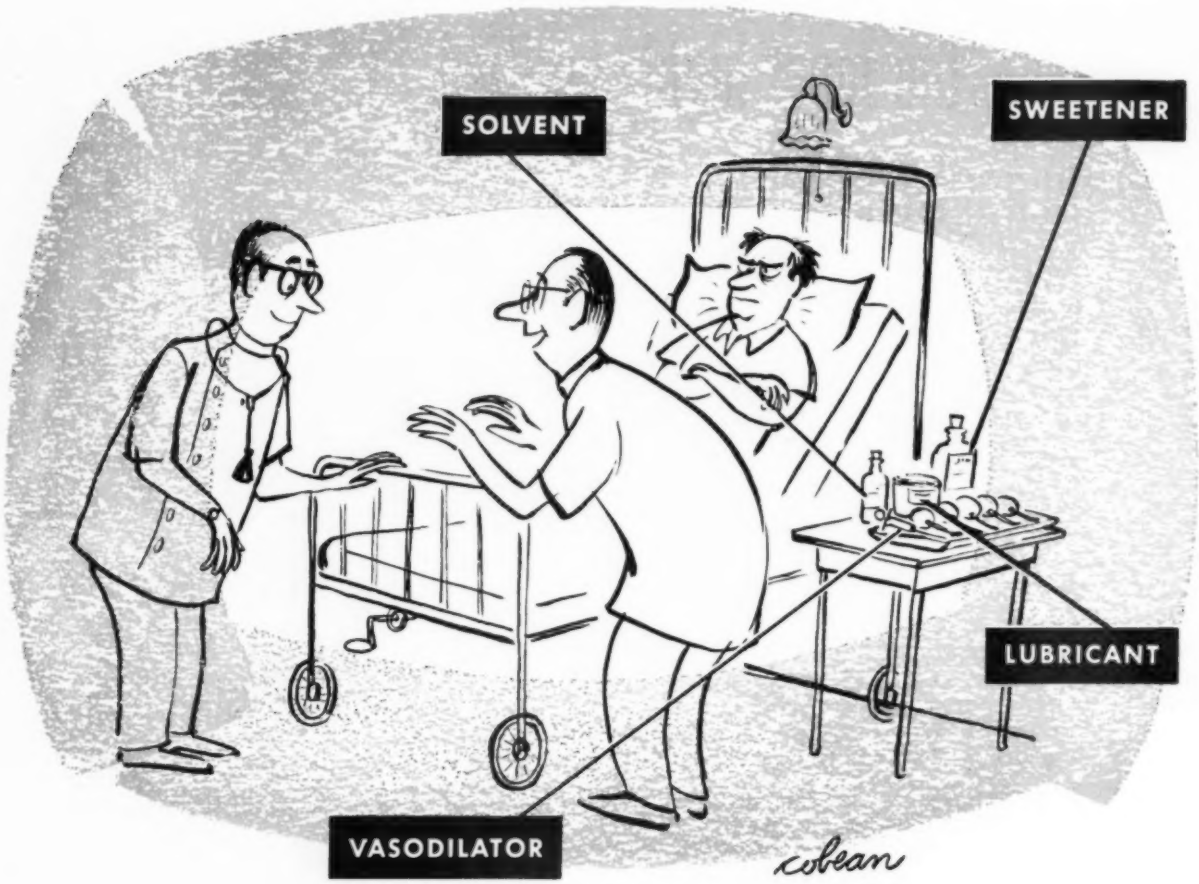

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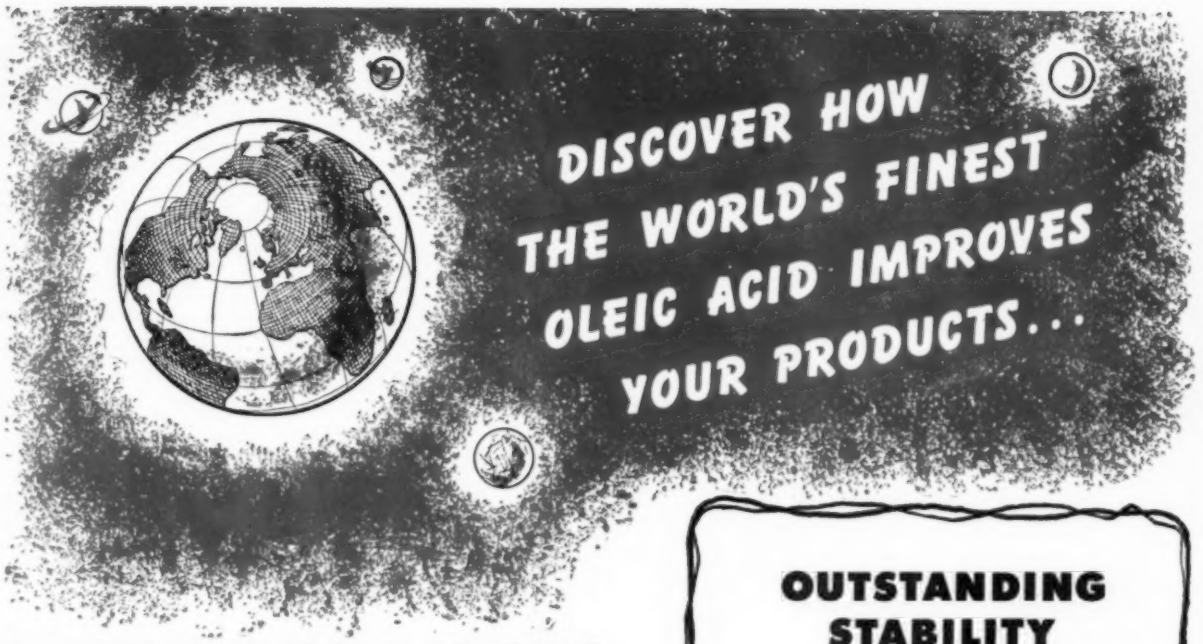

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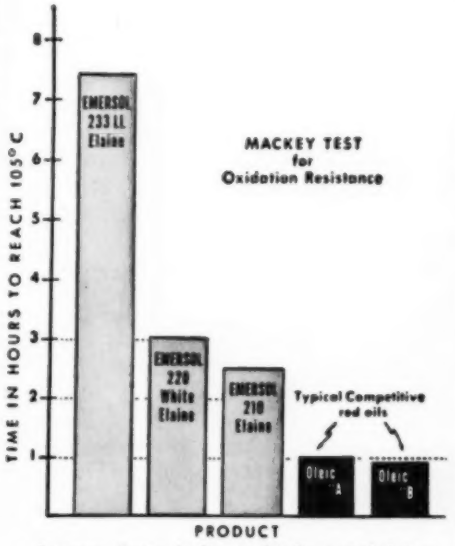

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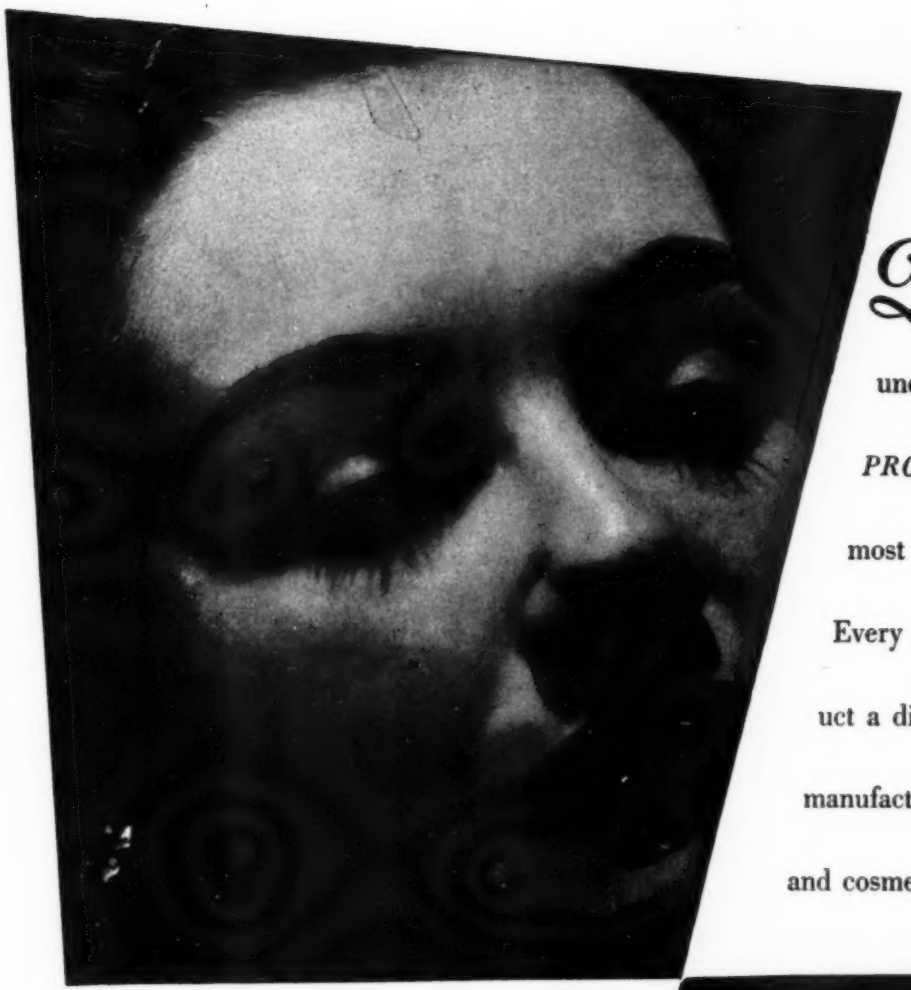

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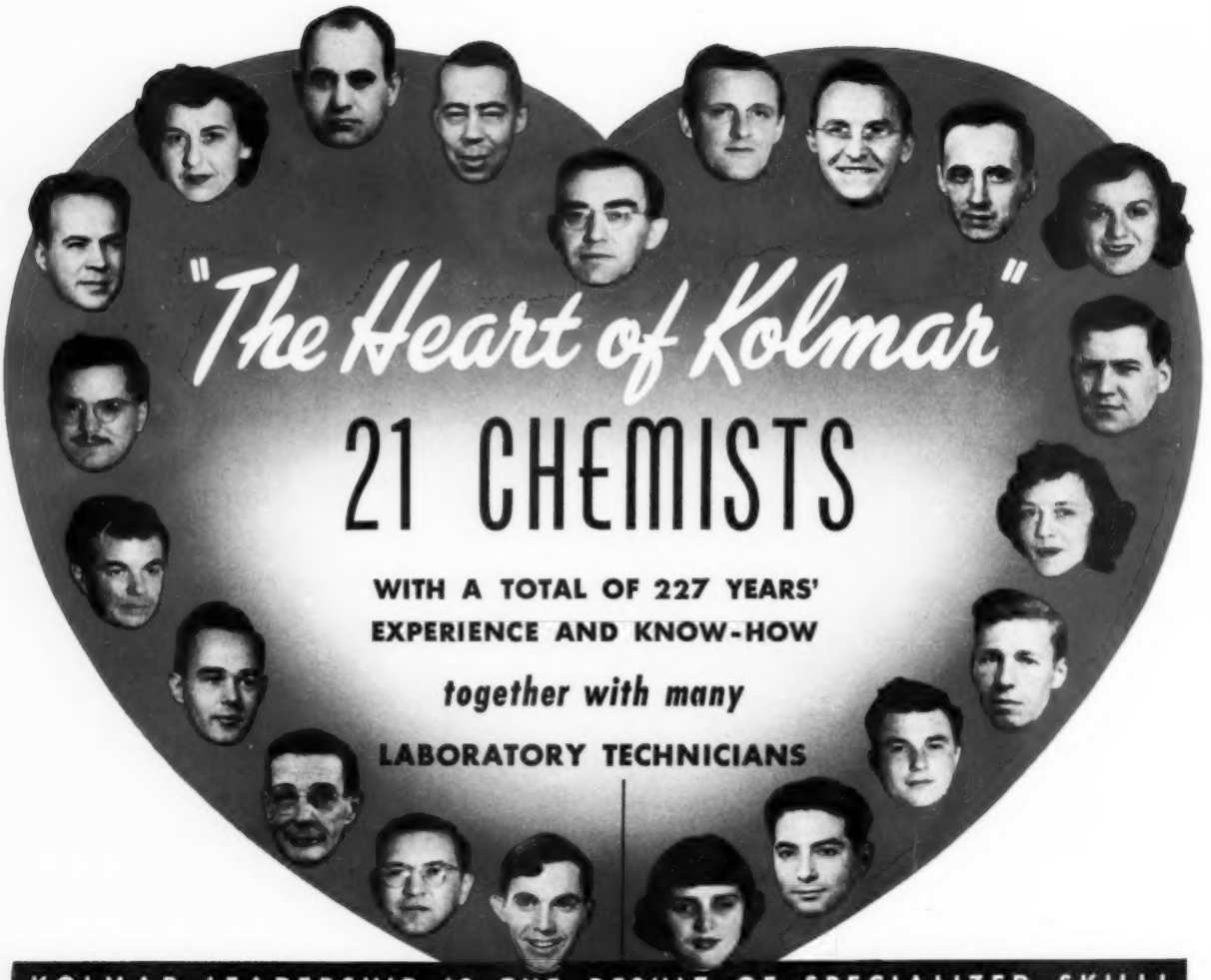
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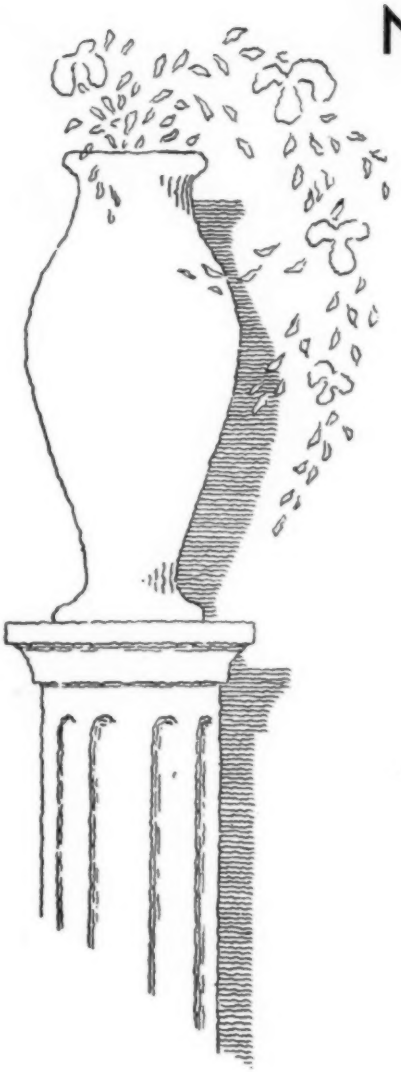

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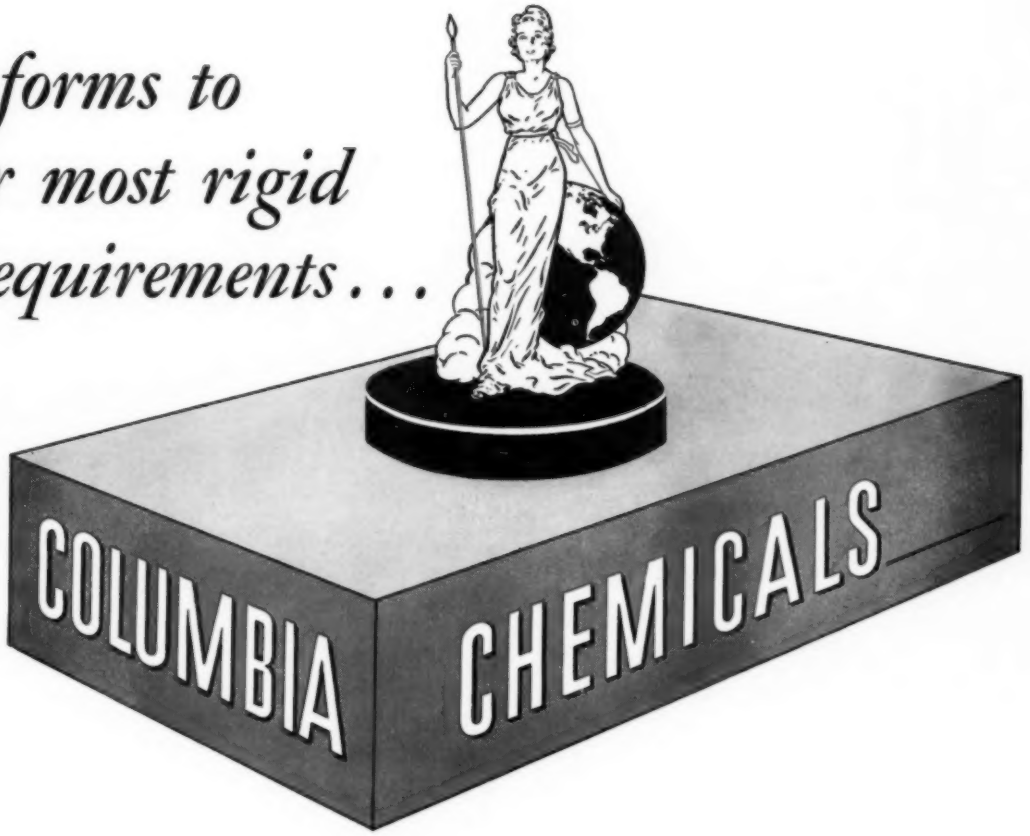

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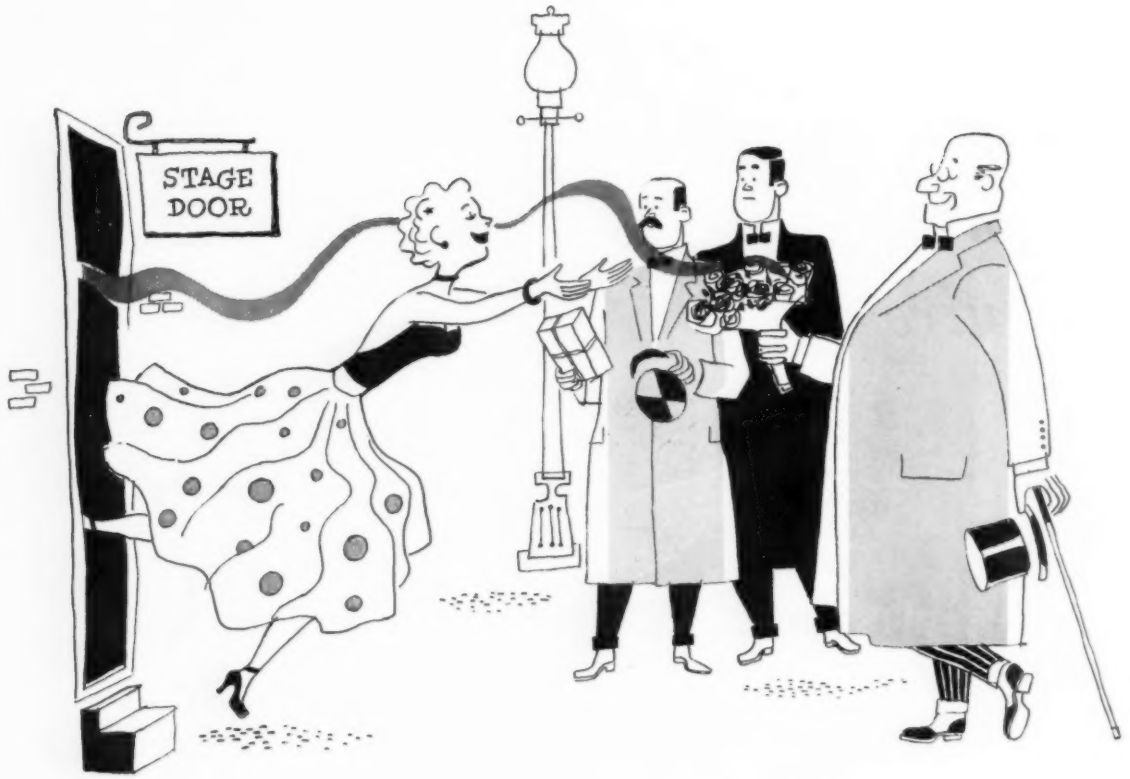

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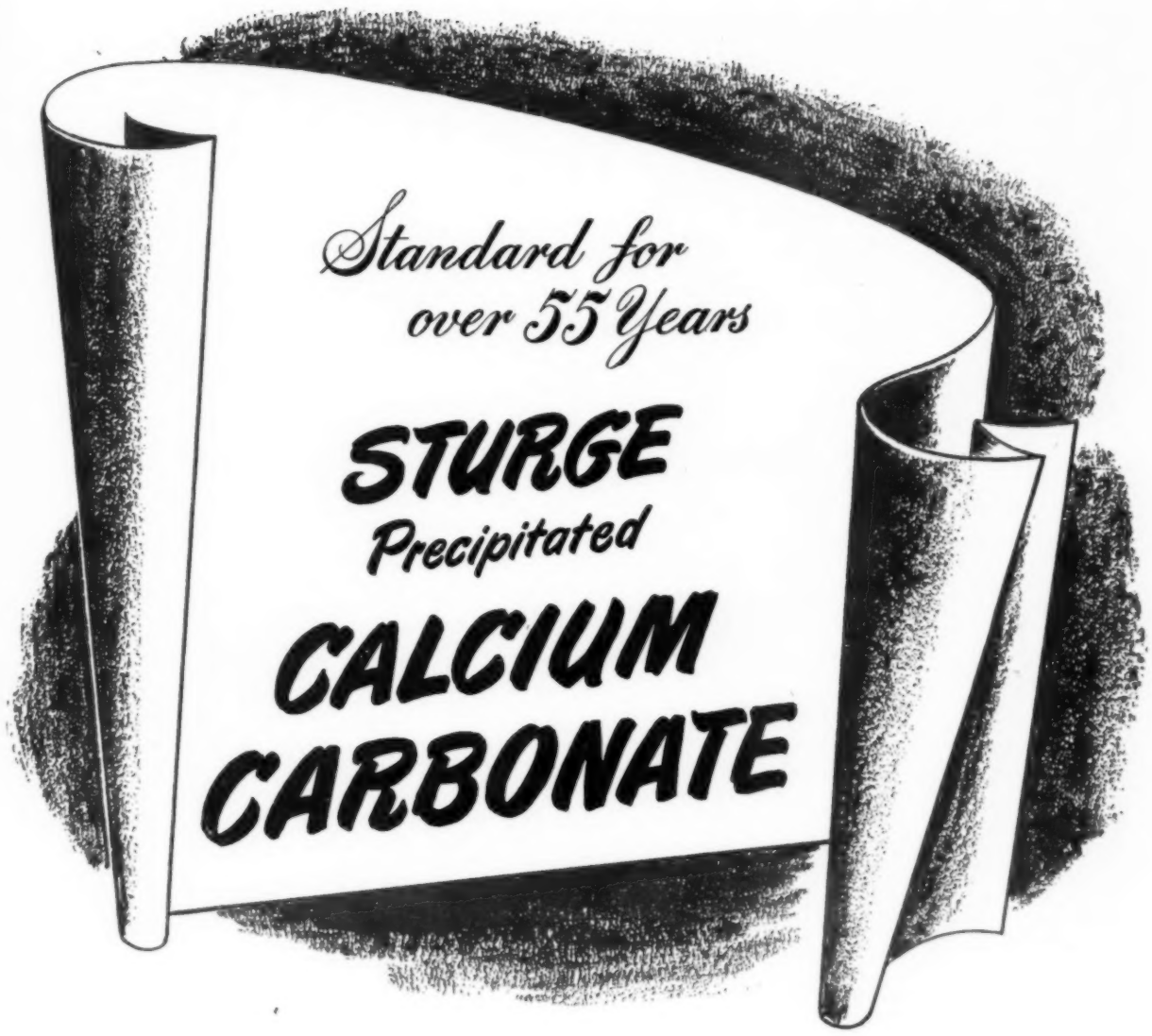

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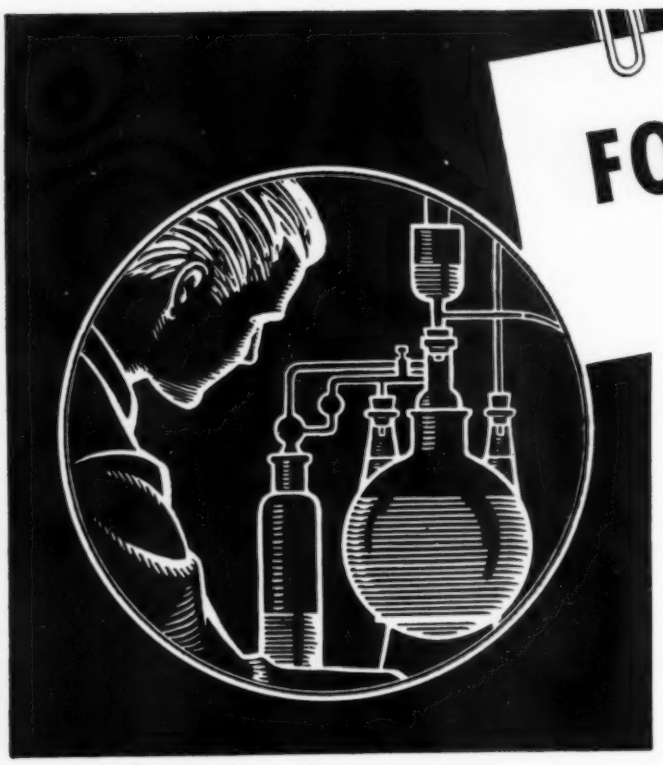

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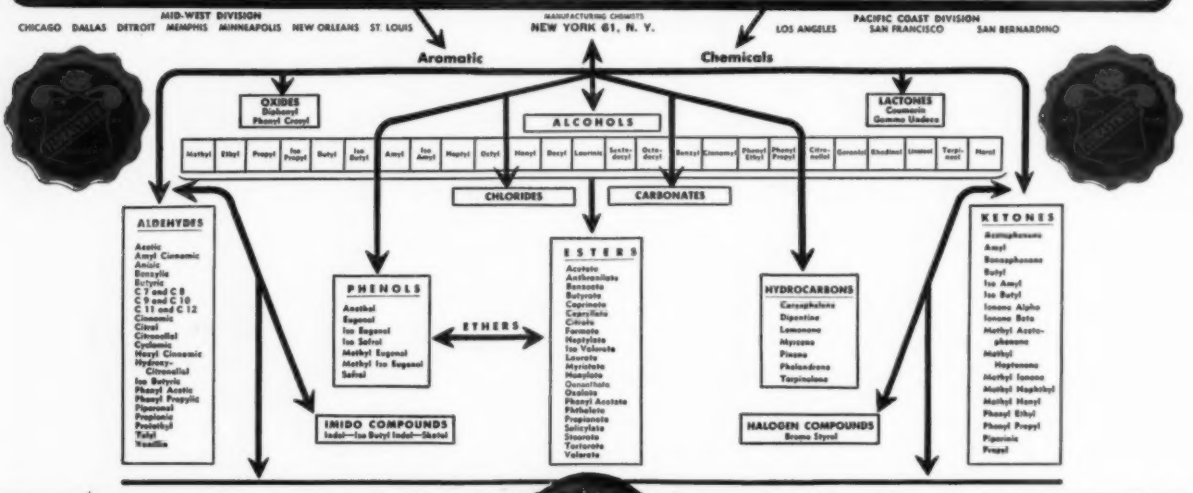

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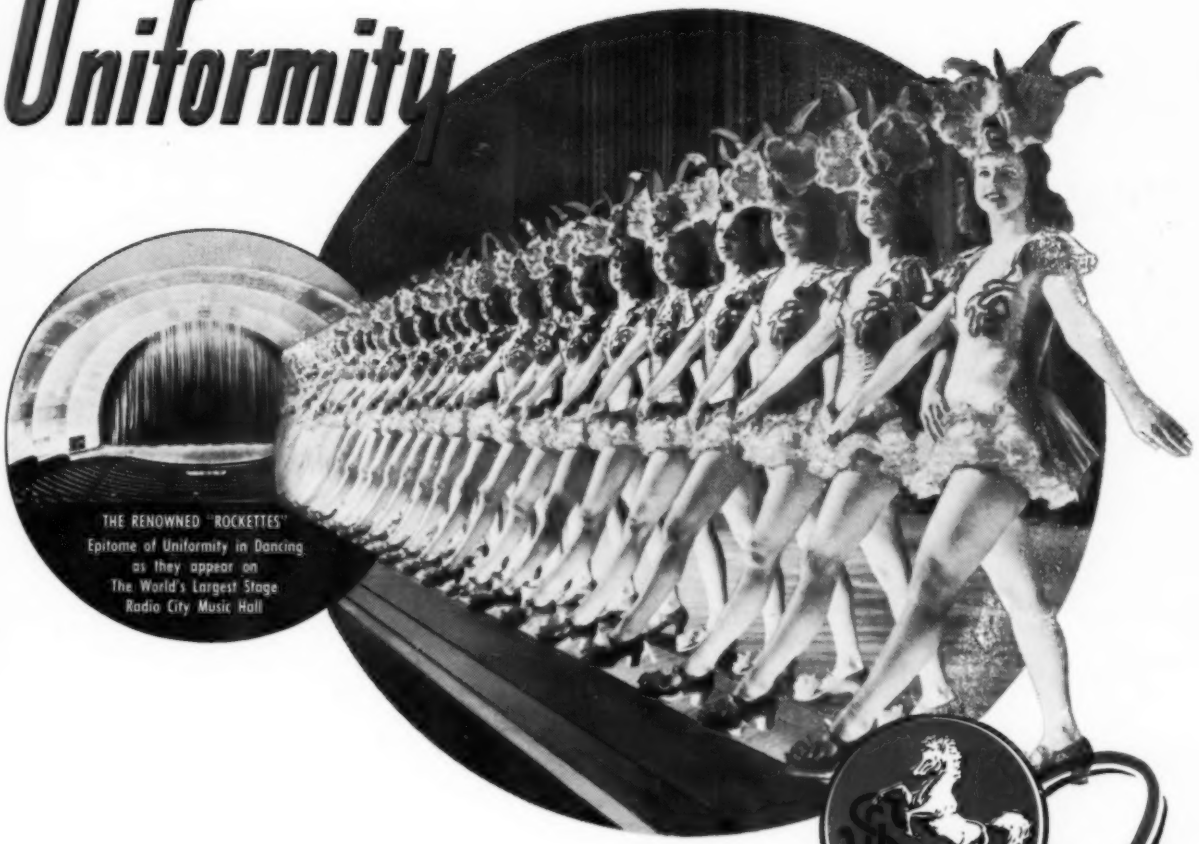
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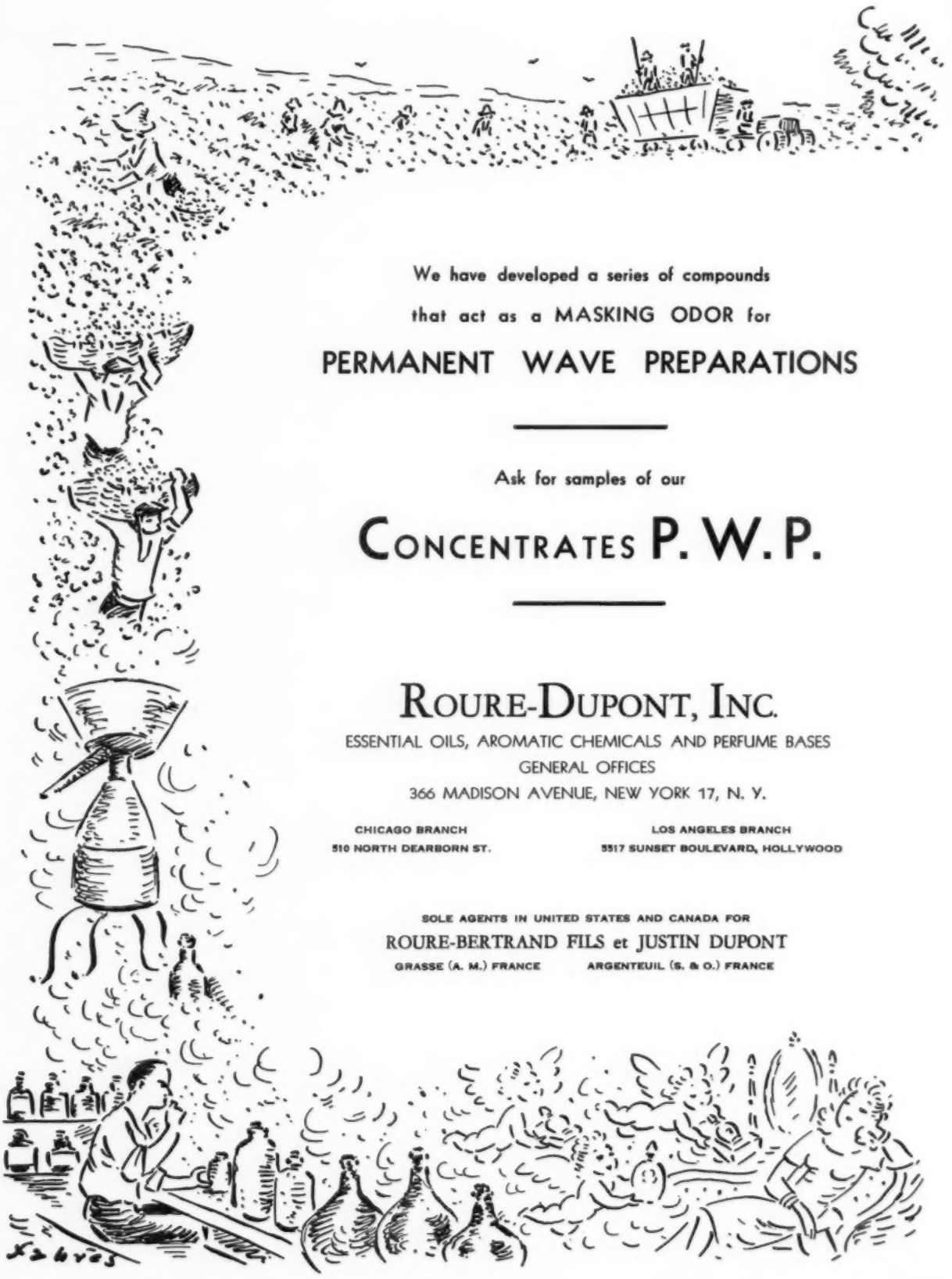

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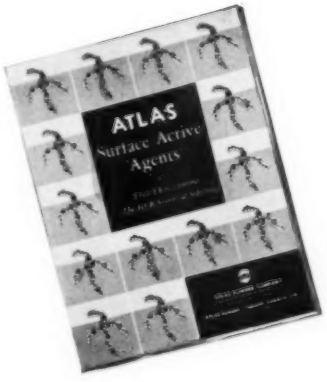

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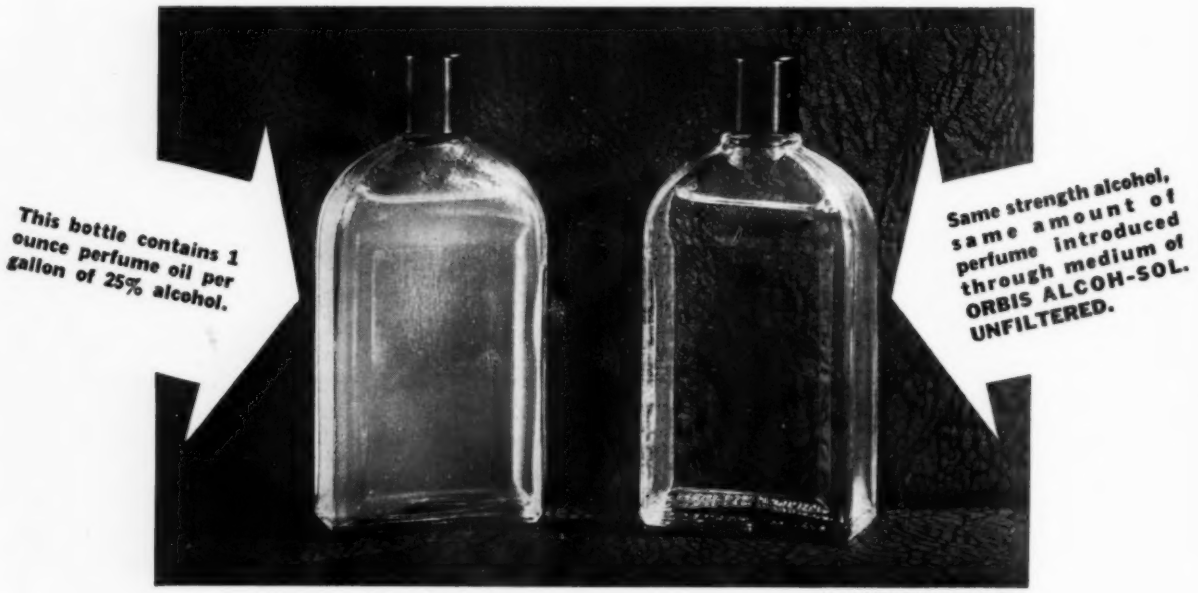
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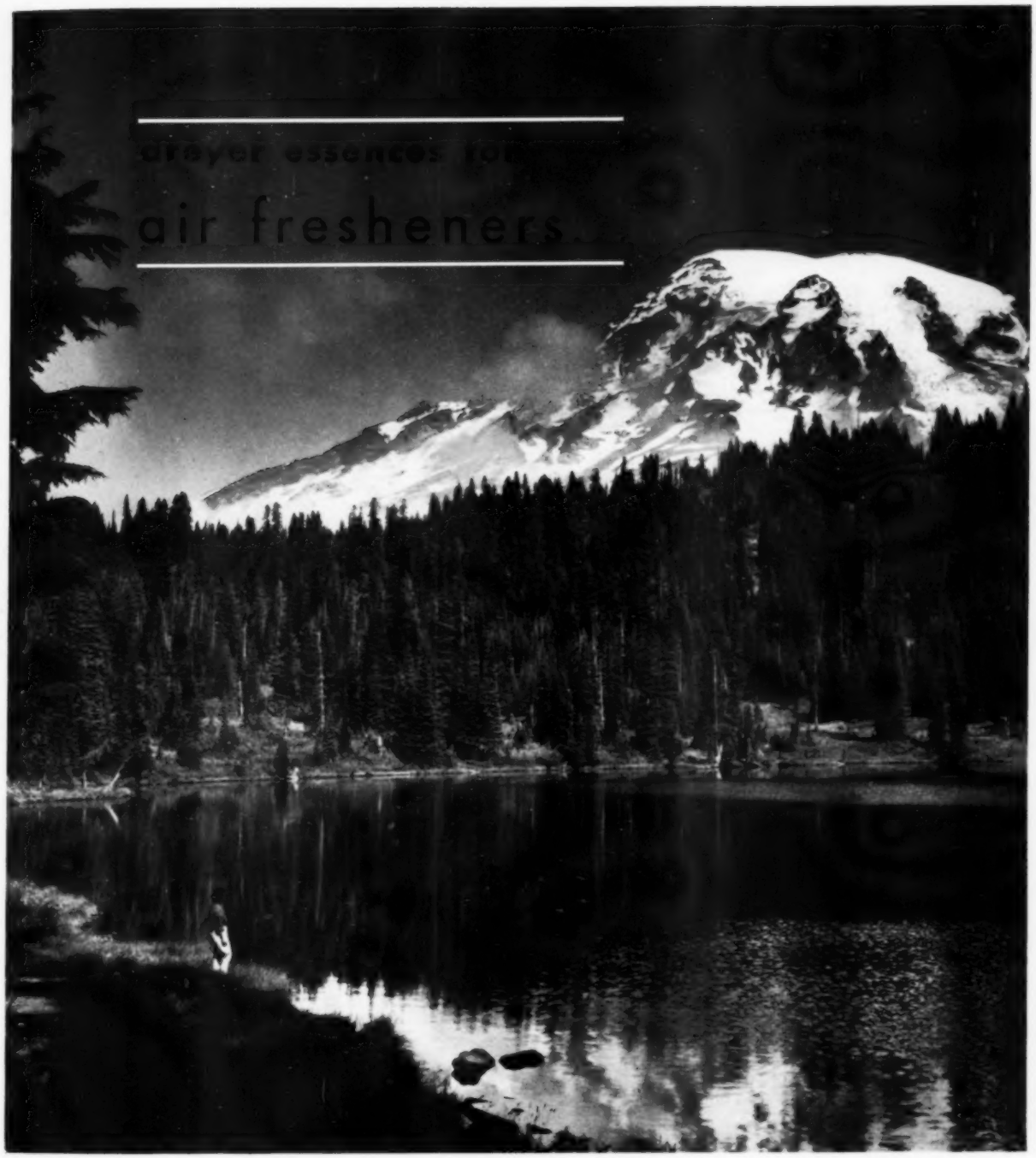

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MODERN COSMETICS, published by the Drug & Cosmetic Industry, was the first book on the formulation and manufacturing procedure of cosmetics to be published in America. It was an immediate success. In two previous editions eight thousand copies were sold in America and in forty-two foreign countries.

The Second Edition of MODERN COSMETICS has been out of print for three years. During that time we have received more that a thousand inquiries for this work. But rather than bring out a hurry-up job to meet the urgent demand we decided to wait.

E. G. Thomssen, B.S., A.M., Ph.D., Chemical Consultant, Author of "Soap Making Manual," "Modern Soap Making," and well known contributor to Technical literature, was engaged to completely rewrite this new Third Edition—to bring to it all the new developments of the past ten years in manufacturing instructions, materials, and formulas.

To those who have made MODERN COSMETICS their handbook we say—this new edition will be infinitely more useful to you, because of the scope of new material, new tested formulas, and the correction and modernization of the procedure in formulation.

Chemist, factory manager, perfumer, owner—anyone interested in cosmetics will find MODERN COSMETICS a valuable help in business. It is a technical book, filled with formulas, procedure, manufacturing practices, yet so clearly and simply written that even one not connected with the industry can understand its text.

The most experienced chemist or factory manager will find in its wealth of information, useful methods new to him. The inexperienced man or woman who wants a clear understanding of the industry, wants to know something about how cosmetics are made, who is working on a small scale with the handicap of little experience or knowledge, will find the book easy to understand, a great help and guide.

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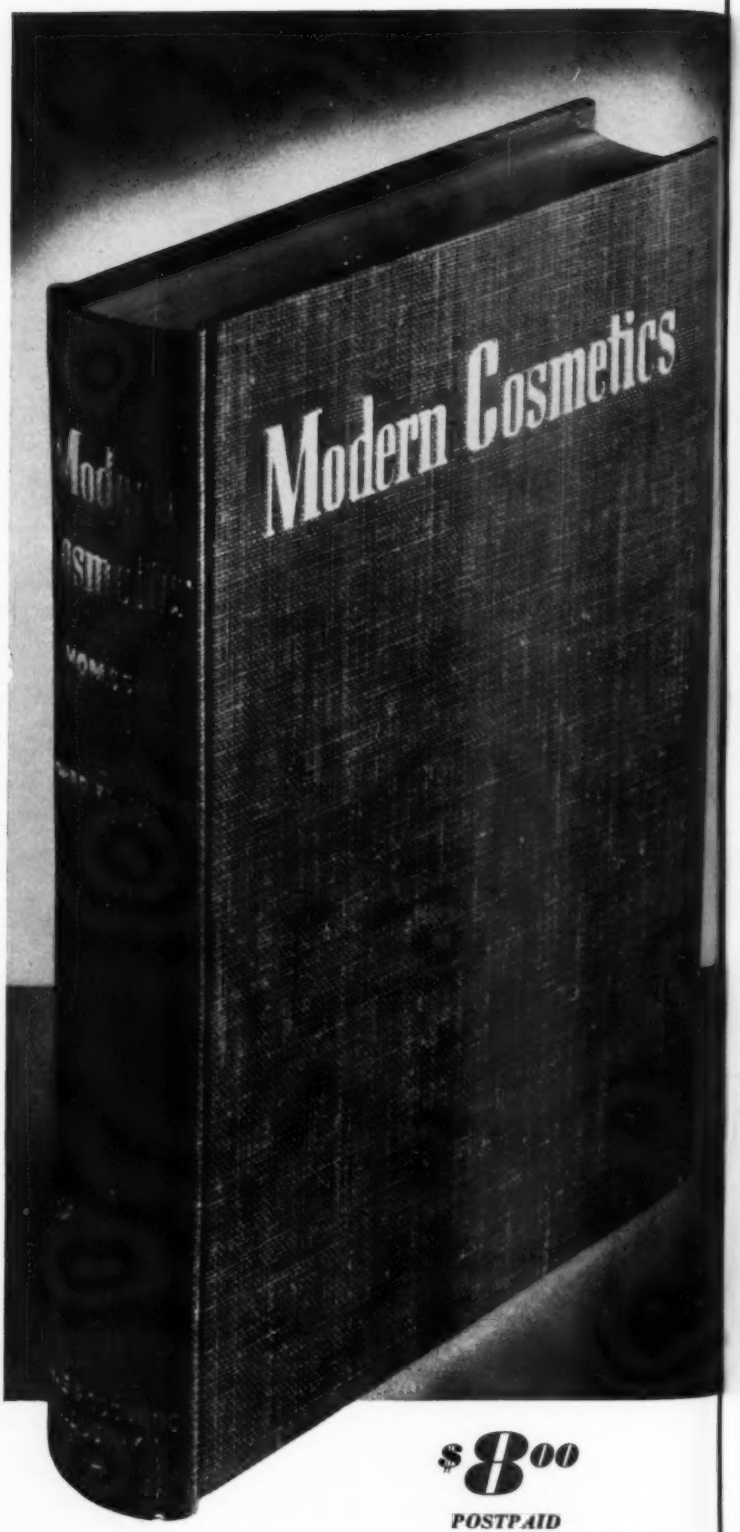

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B.S. A.M. Ph.D.

644 Pages — 70 Chapters

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KEEPING POSTED

Armour and ACTH

ARMOUR LABORATORIES is now marketing its ACTH, which has been made non-allergenic and free of posterior pituitary factors, under the trade-mark of Acthar. The product can now be dispensed by or on the prescription of a physician, and is available for ambulatory patients, being no longer restricted to hospitalized patients.

Regarding elimination of impurities, Armour Laboratories points out that the adrenocarticotropic hormone is derived from the anterior lobe of the pituitary gland. In the manufacturing process, however, posterior pituitary factors and other undesirable proteins are carried over into the crude ACTH. The posterior factors can cause cramps and other bad reactions if they are present in minute quantities. Other proteins in the crude ACTH have been held responsible for allergies. Each lot of Acthar is submitted to six biological tests to make sure that it is free of post pituitary factors and other contaminating hormones and proteins.

Maintenance dosage in rheumatoid arthritis is said to be only one-third to one-fifth the amount required with adrenal hormone substitution preparations, and therefore the cost of Acthar to the patient is as low or less than that of a synthetic adrenal hormone. The price of the product was reduced fifty per cent last May, and the principal reason why the unit cost of Acthar has not been further reduced is the soaring price of the raw material. When armour started making ACTH in volume, hog pituitaries were quoted at $8 a pound. Market prices have recently been as high as $40 to $50 per pound, and quotations at still higher levels are coming from foreign countries. A recent quotation from Hamburg is reported at $295 per kilo.

Armour Laboratories volume has expanded to about three times its former figure as the result of this new development. Formerly, Armour Laboratories did a volume of about $10 to $12 million in finished products and raw materials, such as insulin and other animal substances, supplied to other pharmaceutical manufacturers. Now the volume is running upwards of half a million a week, so that the annual volume will run to $25 or $30 million at least.

As a result of this development, Armour has been completely staffed as one can note from the recent news issued by the firm. Furthermore, an international company has been organized to develop business in other parts of the world. Plans call for the creation of laboratories in Argentina to produce insulin and the other products of the company. Expansion in Britain and other European countries is also part of the picture. S. B. Bradshaw, formerly general manager of Armour Laboratories, is now heading up the international phase of the business.

Antihistaminics and Colds

MR. WILLIAM L. BAUGN, Medical Director of the Guide Lamp Division, General Motors Corporation, reporting on a twenty-seven month study on "Antihistamine Chemicals in the Treatment of the Common Cold," summarizes as follows:

"Numerous investigators have reported that much benefit can be derived from the use of antihistaminic drugs in the treatment of the symptoms of the common cold. The antihistamines are not a cure-all. The body defense mechanism still plays an important role in curing the true virus common cold.

"1. The indiscriminate use of antihistaminic drugs among workers in industry is to be avoided because of possible side effects. It has been a practice of industrial physicians to remove the worker from dangerous machinery while he is taking antihistaminic drugs.

"2. It is advisable to give workers who operate intricate machines a trial therapy period with an antihistaminic drug while off the job, to determine in advance whether there are any undesirable side reactions, such as drowsiness. With the experience gained and with proper instructions from the industrial physician, workers will know in advance whether they can use these new antihistaminic agents with safety while at work.

"3. Not all antihistamines cause exactly the same

reactions. Therefore, it is a matter of selecting the most effective for the individual which will cause the fewest side reactions.

"4. All available statistical studies and other scientific data indicate that the antihistaminic drugs have a legitimate place in the treatment of the symptoms of the common cold. Among workers, their effectiveness is limited by the unfavorable side reactions which occur. The specific cure for the common cold, whether it be an antibiotic agent, a sulfa drug or a vaccine, is still to be discovered."

From this summary it appears that the antihistamines will take a normal place in the list of drug preparations for the common cold. By a "normal" place we mean a preparation for the common cold that many people swear by, and other people swear at. There is no drug preparation that is a sure cure for all colds in any one person, and there is no preparation for the treatment of colds which all people consider is beneficial. The antihistamines in this respect, appear to be no different from any other preparation which has preceded them.

Nine Years for Misbranding

A NINE-YEAR sentence—the most severe sentence ever given for violation of the Food, Drug, and Cosmetic Act—was imposed by Federal District Judge Marion S. Boyd in Memphis. The sentence was imposed upon Sam Shokunbi following conviction on nine counts of an indictment charging misbranding of herbal remedies recommended for a wide variety of diseases, including those of the heart, liver, and stomach. He was sentenced to one year on each count, with the sentences running consecutively. In addition, the Judge fined the defendant $9,000 and costs and issued a restraining order prohibiting distribution or transfer of his property until the prison sentence has been served.

Digesting Lay Publications for Doctors

NOW THAT the subject of health and disease ranks third in public interest, preceded only by sex and religion, the publication of articles and books on health and disease has taken on added significance. We all know of the intense interest created by articles in the Readers' Digest and in other magazines and in newspapers. The public gains knowledge and goes to the doctor displaying an attitude that he knows more than the old fogey he is consulting and to whom he is paying money for advice. Apparently in the belief that the doctors of the country should be acquainted with the articles which these people might possibly read, Schering Corporation now circulates to the medical profession a pamphlet called "Medicine in the News," which is described as "Summaries of current magazine articles and press stories on medical subjects read by your patients. These are presented for your information without editorial comment. This service is provided to physicians by Schering Corporation and should not be construed as a recommendation of any product or article mentioned, nor as an endorsement of the publication of such material."

It seems a shame that the doctor now has to do extra reading to keep up with his patients, but such is the case. However, this digest pamphlet aims to keep him informed with a minimum of effort on his part.

The sponsoring committee comprises Dr. Konrad Dobriner, Sloan-Kettering Institute for Cancer Research, New York; Dr. Paul Holbrook, Tucson, Arizona; Dr. Gregory Pincus, Worcester Foundation for Experimental Biology, Shrewsbury, Mass.; Dr. E. C. Reifenstein, Jr., Research Institute, Oklahoma Medical Research Foundation, Oklahoma City, Okla.; Dr. I. V. Sollins, Chemical Specialties Co., Inc., New York, N. Y. and Syntex S.A., Mexico City, D. F.; and Dr. Abraham White, U. of California.

The Mexican sub-committee consists of Dr. Javier Robles Gil, chief of the department of rheumatology of National Institute of Cardiology; Dr. Francisco Gomez Mont, School of Medicine, National University of Mexico; and Dr. Frederico A. Lehmann, medical director of Laboratories Hormona, S.A., Mexico City, D.F.

The invited group includes clinical workers in rheumatology, cancer and other diseases, as well as experimental workers in the fields of biology, biochemistry and pharmacology.

National Production Authority

THE National Production Authority is set up to operate to care for those problems handled by the War Production Board during World War II. NPA Administrator William H. Harrison has recently appointed Joseph Sumner Bates, president of the Bates Chemical Company, Media, Pa., as director of the Chemical Division, and his job may be compared to that of Fred Stock in the WPB during the last war. Mr. Bates has had considerable experience in the chemical and drug field. At one time he was with Calco Chemical Company, and fairly recently he was president of Ciba Pharmaceutical Products. At one time he was vice-president of General Aniline & Film Corporation, the company being under Government control at the time. In 1945, as chief of a mission, he surveyed the I. G. Farben companies in Germany for the Secretary of War. Mr. Bates' ranking assistant is Charles C. Concannon, long known to this industry for his service with the Department of Commerce.

Nail Polish and Engine Repair

EVERY month the mechanics at Pan American World Airways engine overhaul base use enough nail polish to keep their wives' toenails and fingernails brilliant for fifty years. When an engine is being reassembled, each screw connection in the electrical hydraulic, fuel and oils systems gets a stripe of nail polish. If one connection should begin to work loose, the break in the red stripe can be detected at a glance and the connection tightened. What could cause a serious mechanical failure is thus averted by a small dab of the polish. Nail polish is preferred because it is quick drying, bright-colored, and because it comes with its own built-in paint brush.

Pregnenolene Conference

A SYMPOSIUM on steroids in clinical and experimental practice is being held in Cuernavaca, Mexico. Membership in the conference is limited by invitation to those individuals nominated either by the committee from the United States or by a Mexican subcommittee. The conference will deal with the present status of the

non-11-oxygenated steroids and an effort will be made to evaluate clinical therapy with such steroids in the fields of rheumatology and cancer. Seeking to evaluate the status of the non-11-oxygenated steroids, especially in rheumatology, the committee has noted that only a few compounds of this nature actually have undergone wide-spread clinical investigation.

One of the compounds in this category is pregnenolene, concerning which divergent opinions and findings have been reported in the medical press. To appraise objectively the work done with pregnenolene, the committee has decided to devote a substantial part of the time to the study of the most recent work with the compound.

Benzahex and Benzadrex

THE TRADE-MARK "Benzahex" for agricultural insecticides and fungicides was held registrable over "Benzedrex" for a vasoconstrictor. Although both products are chemical compounds, they are non-competitive and are applied to non-analogous uses. The possibility that the goods may be sold in the same store is not controlling, since one would ordinarily not expect the goods to be made by the same manufacturer. The difference in the marks is not great, but confusion is not likely to occur in view of the extensive difference in character and use of the goods.

Desamine and Dexedrine

THE TRADE-MARK "Desamine" was held by the Patent Office to be too close to "Dexedrine" to avoid likelihood of confusion when applied to the same or substantially similar goods. In the case at issue the marks were applied to a treatment for obesity and to stimulate peripheral neuro-muscular mechanisms under the control of the sympathetic nervous system, and a prior decision held that these two preparations differ widely. This decision was reversed in the Patent Office solely on the ground that the opposer failed to prove that the goods were related. Having failed to take testimony, the opposer is limited to the goods stated in his registration. Labels accompanying the notice of opposition cannot be used to establish any prior use of what is disclosed on the labels.

SKF Win Public Relations Award

MEDICAL color television has won for Smith, Kline & French Laboratories the top award of the American Public Relations Association for the year's outstanding public relations project in the use of graphic arts. The Silver Anvil Award—one of eleven similar top awards made last month—was presented to G. F. Roll, Public Relations Manager of SKF Laboratories. In making the award, Howard Bonham, chairman of the APRA Judges Committee, said:

"The unique and outstanding contribution to education—the communication of knowledge—by the Smith, Kline & French program in providing full color visual demonstration in surgery via the television medium was an epochal advance in graphic presentation. The Board of Judges chose the Smith, Kline & French program as the clearly demonstrable proof that the field of graphic arts had been immeasurably broadened by use of this still new medium in the field of public relations."

Fair Trade and Trade-Marks

A MANUFACTURER cannot play fast and loose with protection of his trade-mark through use of the Fair Trade Acts in the opinion of New York State Supreme Court Referee Isidor Wasservogel who, on November 29, dismissed an action brought by Columbia Records to restrain a number of its dealers from advertising and selling Columbia long-playing records at less than the minimum resale prices fixed by Columbia. The court held that since Columbia had omitted from its price-fixing contracts with dealers its entire new line of 45 r.p.m. and the older 78 r.p.m. shellac disks on which its business was originally established, it could not now contend that its trade-mark or good-will had been damaged. Referee Wasservogel further stated that evidence proved that even within the last year, Columbia had freely permitted sale of its shellac records at any price they wanted to charge, and that the record company even had contributed financially toward dealer advertisements offering these disks at cut prices. The court said that in his opinion the Feld-Crawford Act (N. Y. State Fair Trade Act) was essentially to protect trade-marks and that Columbia was not seeking to use it for that purpose.

Anyone who has been associated with the Fair Trade movement before and since the enactment of the fair trade laws, will realize that this decision is sound. It will be recalled that the U. S. Supreme Court decision upholding the constitutionality of the fair trade laws was based on the property rights of manufacturers in their trade-marks. Manufacturers in this industry will do well to study their own positions in light of this decision.

The Dental Business

IN THE 1940-50 decade, total dental income has more than doubled, and since 1933 it has quadrupled, says Peter B. B. Andrews in the October Merck Report. The total income of dentists this year, including salaried dentists and those practicing independently, should approximate $1.1 billion, compared with slightly under a billion in 1949. Mr. Andrews continues:

"The current boom in dental care, and concomitantly in the broad range of dental supplies, has taken place despite extensive advances in treating teeth with sodium and ammonium compounds to prevent decay. It remains to be seen if these and other treatments with newer discoveries still to come will adversely affect the dental profession. To date, there certainly has been no deterrent from these developments; to the contrary, it appears that the extensive publicity and promotion connected with these antidecay products has stimulated even more interest than ever in dental care."

During the 1930-40 decade, the number of dentists graduated apparently balanced the number who retired or died and there was practically no change in the number of dentists practicing, 70,344 in 1930, and 70,601 in 1940. The number of practicing dentists in this country at the end of 1948 stood at 78,000, of which 6,000 were in salaried civilian practice. In addition there were some 1,600 in the Armed Forces, thus making a total of about 80 million. This total indicates that dentists now are the third largest independent professional group in the country, being outnumbered only by lawyers and physicians. From these facts Mr. Andrews observes:

"Evidently, then, the major part of the demand for dental supplies rests with the independent dentist, while the needs of the salaried dentist would largely

consist of materials financed by an institution. Incomes of independent dentists, too, run substantially higher on the average than incomes of salaried dentists—perhaps as high as 50 per cent more.

"If the sensitivity of demand for dental service in relation to changes in disposable income is analyzed in comparison with other materials and services, it will be found to be well below the average sensitivity, reflecting its basically essential character.

"Actual expenditures for dental materials and equipment this year should approximate $150 million. This would be a gain of about $20 million over the estimated $130 million total of 1949."

Clinical Testing Safeguards

IN ADDRESSING the Research and Development Section of the A.D.M.A. on clinical work with vasodilators, mostly khellin, Dr. Louis N. Katz of Chicago had quite a lot to say about the administration of the drugs which are being evaluated through administration to patients. He spoke at some length on what he called "ceremonious" administration, pointing out that the actions of the doctor when giving a particular drug could quite markedly affect the patient's reaction to it. He insisted that placebos were essential when attempting to evaluate a drug, and that these placebos should be indistinguishable from the real thing, and, if possible, should produce the same side effects as the true product. He believed that only one person in a clinic, the person dispensing the drugs, should know which patients were receiving the placebos and which were receiving the drug itself. He insisted that the doctors administrating the drug, the nurses, and everyone else having anything to do with the patients should be kept in complete ignorance as to whether or not any particular patient was receiving the drug or a placebo. He claims that this is essential so that the doctor's actions and interest regarding those who are receiving the drug will not affect the patient's reactions. Also it is necessary so that the doctor will observe all patients with equal interest, and not be influenced by undue optimism caused by unsupported belief in the value of the drug.

Laxatives Move On

THE laxative business is definitely off on a new wave now with the methyl cellulose type of preparation now being promoted in proprietary fashion by direct advertising to the public in the daily newspapers. The number of laxatives using methyl cellulose as a base promoted through ethical channels, or by means of advertising only to the medical and pharmacy professions has been steadily increasing, but now this type of product is being advertised directly to the public.

Since constipation is perhaps the most common of all ailments affecting people of all ages in all walks of life, the market for laxatives constitutes one of the largest of the markets for all groups of drug products, particularly for proprietary or over-the-counter drugs products. But the market moves along with new styles of fads periodically coming into vogue, and then falling by the wayside as they are replaced by later discoveries. Thus the seidlitz powders of the olden days were pushed aside by the Bularian bacilli, which in turn was replaced by mineral oil. Then came the agar preparations which depended for a large part of their efficacy on the production of bulk. But agar was replaced by psyllium seed, and this was replaced by gum karaya with its very high percentage of basserin, which produced more bulk than any of them. Now we have arrived at the point at which methyl cellulose is looked upon as the preferred ingredient to perform this function.

Of course all these products need irritants to give them what is known as the "kick-off," so cascara sagrada, buckthorn bark, senna, rhubarb, phenophthalein, and other ingredients continue to have their uses. Also the salines, which also act through increasing the bulk still have their adherents. Naturally the methyl cellulose needs something to give the "kick-off" after the bulk is produced, and some use prune concentrate and other ingredients to obtain this motility.

The type of action—bulk plus motility—of the methyl cellulose type of laxative is no different than recently introduced types of laxatives, and in fact this was the slogan used for years by Saraka, a gum karaya product first brought in from Germany under the name of Normacol, or something similar. So the present wave in laxatives presents nothing new in method, but only a change in the bulk producing ingredient.

Multiple Dose Injection Study Panel

COOPERATION between the U. S. P. Committee, the Committee on National Formulary and the Combined Pharmaceutical Contact Committee on the problem involved in limiting the number of doses in containers for injections has resulted in a Study Panel being created. Dr. Justin Powers, Chairman of the Committee on National Formulary, has appointed Dr. W. Arthur Purdum, Chief Pharmacist, Johns Hopkins Hospital, and Dr. Hugo H. Schaefer, Dean, Brooklyn College of Pharmacy, to represent the National Formulary. Similarly Dr. Frank O. Taylor, Chairman of the Combined Pharmaceutical Contact Committee, has appointed Dr. Edgar B. Carter, Abbott Laboratories, and Roland H. Noel, Bristol Laboratories, to represent the Contact Committee. For the U. S. P. Committee of Revision, Dr. Lloyd C. Miller, Director of Revision, has appointed Dr. George E. Farrar, Jr., Temple University School of Medicine, and Dr. Leslie N. Gay, Johns Hopkins School of Medicine. The chairmen of the three committees will serve as ex-officio members of the panel.

The U. S. P. and N. F. Committees have postponed effectiveness of provisions in their compendia which would limit the volume of injections in multiple-dose containers to ten usual doses. This action was taken following a survey conducted by Dr. Taylor of U. S. P. products seriously affected by the limitation. This revealed that some thirty-six manufacturers market thirty U. S. P. products, the packaging of which in one way or other exceeds the limitation of ten U. S. P. usual doses. In some cases the products are marketed in volumes corresponding to approximately fifty U. S. P. usual doses. This situation arises in part because some products have come to be used for indications requiring much larger amounts than the U. S. P. usual dose. Thus, there arises in this instance the question of whether the U. S. P. dosage statement should be revised or whether the trade practice should be altered. A second problem revealed in Dr. Taylor's report concerns the several cases where the U. S. P. states no usual dose in as much as the dosage must be modified according to the needs of the patient by his physician. Finally, an important aspect of the problem, which cannot be considered completely beyond the purview of the study, is the effect that the U. S. P. limitation automatically has upon non-official preparations.

Nutrition and Disease

DIABETES, hardening of the arteries and heart failure are among the major diseases likely to be curbed by the next great advances in the science of nutrition, according to Dr. Charles Glen King, scientific director of the Nutrition Foundation. Enormous strides toward eliminating dietary diseases are being made by the food industry in this country through its long-range program of research and education, said Dr. King, who is professor of chemistry in Columbia University.

"Rickets, pellagra and scurvy have almost disappeared. Goiter, nutritional anemia, and tooth decay are still prevalent, but they are yielding steadily to advances in basic research and technology," according to Dr. King, who continued:

"Vitamin D milk, iodized salt, enriched bread, citrus fruits, frozen green vegetables and fluorinized water supplies can account for a large part of these improvements in public health. The next great advances will extend to a higher plane of nutrition. They will reach into the zone of greater protection against premature aging and such diseases as diabetes, hardening of the arteries, overweight and heart failure."

Despite the significant progress achieved thus far, Dr. King said, there are so many problems still to be solved that the chemist entering food and nutrition research has before him "unlimited opportunities and unlimited difficulties on which to concentrate." The layman may suppose that scientists know all about the composition of foods, but knowledge of how foods function inside the body is "vastly more deficient."

For example, Dr. King pointed out, there is widespread agreement that natural protein foods of animal origin—liver, meat, milk, eggs—contain essential nutrients which have yet to be identified. The number of such new vitamins cannot be safely estimated from present evidence, but several investigators are convinced that at least two, and perhaps four or five, factors remain to be discovered. Chemists will not have fulfilled their obligation to the public until they can identify all the essential constituents of food, measure them quantitatively, and discover how they are formed, how they function in living organisms, how they react during processing and storage, and gain a general knowledge of how significant they are in relation to human and animal health.

A growing appreciation of the interdependency among nutrients was noted by Dr. King, who cited the fact that two newest members of the vitamin B complex, folic acid and vitamin B_{12}, have been found to function closely with vitamin C and choline; with mineral elements iron, copper and cobalt, and with methionine and other amino acids.

"The complexity of such interdependency among the nutrients serves to emphasize the importance of a generous intake of protective foods as insurance against deficiencies created by imbalances, in contrast to 'absolute' deficiencies," he said.

Practical gains are likely to be achieved gradually from an intelligent use of amino acids in human food materials and in raising the nutritive quality of animal feeds, said Dr. King, but he added:

"A warning is also at hand, showing that an indiscriminate use of amino acids, either in human or in animal feeding, may constitute a hazard, unless guided by adequate experimental evidence." He then cited the recent observation of Dr. C. A. Elvehjem an associate at the University of Wisconsin that an imbalance of the amino acids phenylalanine and methionine in rats induced a nervous condition after about twelve weeks. In the field of tooth decay prevention, Dr. King also warned against reliance on any single dietary factor, saying:

"Too many investigators and writers continue to ride their respective hobbies very hard. There is relatively good agreement, nevertheless, that a diet of excellent quality, according to accepted standards among nutrition scientists, exerts a marked protective effect against tooth decay." Fluorine is becoming well established as one of the protective nutrients in experimental animal tests and in large-scale municipal demonstrations supervised by government agencies in which great quantities of fluoride are added to city water supplies, Dr. King noted. Preliminary reports indicate a preventive effectiveness as high as fifty per cent, he said. However, the country's large rural population cannot be reached by controlled addition of fluorine to drinking water, he pointed out, and the protection thus afforded is not sufficient by itself to solve the problem for city residents.

Research and Development Meeting

THE MEETING of the Research and Development Section of the American Drug Manufacturers Association held at Hot Springs, Va., last month was a most interesting and most intense meeting. Attended by scientific men from member houses of the Association the two days were entirely given over to meetings, general in the mornings, and in the afternoon divided into three sessions for individual committees. Subjects discussed before the entire section were: Problems associated with Obtaining and Maintaining Chemical and Pharmaceutical Patents, by Fred A. Klein; Physico-Chemical Techniques for the Separation of Pharmaceuticals, by Dr. Frank H. Wiley, of the Food and Drug Administration; and Clinical Studies with Coronary Vasodilators, by Dr. Louis N. Katz, director, Cardiac Research, Michael Reese Hospital.

Papers delivered to the Combined Biochemistry and Organic Chemistry Committees were Chemistry of Khellin and Related Products, by Dr. P. N. Craig, Smith, Kline & French Laboratories; and Biochemistry and Pharmacology of Coronary Vasodilators, by Dr. Edwin J. Fellows, Smith, Kline & French Laboratories.

Papers before the Physico-Chemical Development Committee were Experiences with the Carey Recording Spectrophotometer, by Dr. F. C. Nachod, Sterling-Winthrop Research Laboratories; General Methods for Evaluation of Purity of New Substances, by Dr. T. J. Webb, Merck & Co.; A Report on the Survey of Instrumentation and Facilities of A. D. M. A. Laboratories by Dr. J. M. Vandenbelt, Parke, Davis Research Laboratories; X-Ray Diffraction in Pharmaceutical Research and Development, by Stanley F. Kern, Lilly Research Laboratories.

Papers before the Pharmaceutical Development Committee were Recent Developments in the Use of Botanical Drugs, by Dr. W. G. Bywater, S. B. Penick & Co.; Technical Service Problems in the Development of Bulk Pharmaceutical Products, by George B. Stone, Chas. Pfizer & Co., and Dr. George H. Schneller, Calco Chemical Division.

Papers before the Research Administration Committee were Research Reporting, by Dr. L. A. Sweet, Director of Research, Parke, Davis & Co.; Role of Clinical Investigation in Pharmaceutical Research, by Dr. M. L. Tainter, Director, Sterling-Winthrop Research Institute.

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THE DEMONSTRATOR CASES

IN CONTINUANCE of its effort to clear its docket and finally dispose of many cases which have been pending for a number of years, the Federal Trade Commission has been holding rehearings on the six cosmetic demonstrator cases. These actions were brought by the Commission shortly after the enactment of the Robinson-Patman Act. This Act was enacted in April 1936, and the actions have been pending fourteen years last month. The cosmetic manufacturers upon whose charges decisions were not reached in all this time by the Commission are six in number including, Bourjois, Charles of the Ritz, Coty, Elmo, Hudnut, and Primrose House. A seventh manufacturer—Elizabeth Arden—was originally cited by the Commission, but a cease and desist order was issued against this firm some years ago. This order was appealed to the Circuit Court of Appeals, but the Commission was upheld. Why the Commission issued an order in the Arden case and not in the others is not entirely clear except that it appears that the other companies kept their cases open before the Commission and thus prevented orders from being issued.

While the order in the Arden case is believed to mean that demonstrators should be proportionalized to all the accounts of the manufacturer on a sales volume basis, it is as vague as the provisions of the Robinson-Patman Act itself. Because of the fact that orders were not issued against any other manufacturers, the Arden order has never been enforced, and the Commission has been trying to solve the problem by attempting to draft a code of trade practices which would cover these activities on the part of cosmetic manufacturers and thus create a situation whereby all manufacturers would be treated alike. However, attempts to draft such a code, which have also been pending for many years, have not as yet resulted in any final action by the Commission.

But now we have a Commission upon which all but one of the five Commissioners have assumed their positions long after these cases were instituted. Furthermore, three of the five Commissioners, including the chairman, were appointed to the Commission at various times *after* the hearings upon the latest proposed code of fair trade practices for the cosmetic industry. Therefore, the majority of the Commissioners is not acquainted with these cases, or with the events which have taken place within the industry during these many years during which these actions have been pending. For this reason, the Commission decided to hold rehearings on the six cases still undecided.

There are some who feel that in these cases the Commission had already made up its mind and was merely holding these hearings to give it some basis upon which to issue its orders. These people are of the opinion that the Commission is really working up to issuing a code of fair trade practices which will require that demonstrators be furnished to all buyers in accordance with the volume of sales of these customers. They feel that the manufacturers should have ignored invitations for new hearings because these hearings have merely served as a sounding board for the Commission attorney, Philip Layton, to press his arguments for a rigid code of fair practices for the industry.

Of the manufacturers cited, Primrose House has about lost interest in the case. This defendant did not accept the invitation of the Commission to appear at a rehearing, and consequently it appears that Primrose House will let the Commission decide as it will without further argument. Another defendant, Charles of the Ritz, is in the position that any decision arrived at by the Commission will be purely academic as far as they are concerned. This is for the reason that this company now has on its books only accounts to which demonstrators are furnished. The company has closed out all accounts to which it did not desire to furnish demonstrators. Therefore, it is expected that a cease and desist order issued against them will not force them to change their methods of doing business with regard to demonstrators as it is conducted at the present time.

The other companies, all of whom are manufacturers of treatment lines, will be seriously affected by cease

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RESEARCH IN ENDOCRINOLOGY†

*By Arthur Grollman, M.D.**

ONE may judge the maturity of a given field of study by the degree to which its interests and activities deviate from the narrow bounds within which new branches of knowledge are limited, and impinge on other, seemingly unrelated, fields of knowledge. From this point of view, endocrinology may be said to have reached a high state of development. No longer are the interests of endocrinology limited to the glands of internal secretions and the diseases induced by their malfunction, but as is so well demonstrated by the researches of Hench and Thorn, it has penetrated widely not only into the field of general medicine, but also into such basic biologic problems as immunity, infection, sensitivity reactions, *etc.* It is true that at early stage of its development, through ignorance and through an uninhibited imagination, workers in endocrinology envisaged the possible relation of endocrine function to many physiological

and pathological states of the organism. However, it required the many basic contributions of recent years to dissociate the fanciful theories of early endocrinology from the established facts and lead to the unforeseen fields of interest with which modern endocrinology is concerned.

The earliest interests in endocrinology were devoted to determining the role of the endocrine organs in disease and to obtaining the hormones in a form suitable for their therapeutic application. Despite the progress made in these fields, there still remains much to be accomplished even in these basic and obvious fields of endeavor. The hormones of many glands—pancreas, thyroid, adrenal medulla and sex hormones—have not only been made available as satisfactory substitution therapy, but, as witnessed by the recent introduction of NPH insulin, have greatly improved to render more adequate their practical clinical use. Artificially prepared synthetic compounds have, in some cases (as in the sex and adrenal hormones), served to replace the naturally occurring hormones.

The most unsatisfactory state regarding hormonal products exists in the case of those which are proteins (except for insulin); namely, the pituitary, and parathyroid hormones. The latter, fortunately, may be dispensed with by the synthetic dihydrotachysterol. In the case of the pituitary hormones, however, there is a marked contract to the physiological evidence pointing to the existence of a number of theoretically useful preparations and the clinical data which would indicate that such preparations as are available are far from effective for the purposes for which they are intended. The gonadotropic principal of the anterior pituitary, for example, has not been found to induce the natural stimulation of the gonads in the male or female which would make it of use clinically in cases of failure of these organs. The same máy be said of the thyrotropic, the growth factor and, in fact, with the exception of the adrenocorticotrophic hormone to be referred to later, the hormones of the anterior pituitary are, despite their obvious importance and interest, still in a purely experimental state of development.

Although much has been learned regarding the function of the various endocrine organs, it may be emphasized that we are still ignorant of the basic function which these substances perform in the animal organism. Several years ago, it was thought that the antagonistic action of the pituitary hormone and insulin could be described in terms of the basic enzymatic reactions concerned in carboyhydrate metabolism, but subsequent work has shown these claims to have been premature. In fact, it is questionable if we know exactly how any of the hormones actually perform their multitudinous functions in the organism. That they subserve some basic enzymatic function comparable to that of the vitamins is evident, but the exact nature of these processes remains to be elucidated. Despite this deficiency in our knowledge, progress in endocrinology has revealed many unanticipated relationships between hormonal action and diverse physiological functions. Water and electrolyte balance; metabolic functions of the primary foodstuffs—proteins, fats, and carboyhydrates; reaction to injury, infection and stimuli generally; alterations in cellular permeability; the physiological functions of kidney, liver, nervous system and other systems of the body, are all intimately concerned with the action of the endocrine organs and have become fruitful fields for investigation.

It is the application of the above-described ramifications of endocrine functions into the general body economy and the acquisition of knowledge concerning the more obvious mechanisms of action of the hormones that have resulted in the greatest advances in the practical application of endocrinology to medical practice. An understanding of the role of the adrenal cortex to salt and water metabolism led to better management of the patient suffering from Addison's disease; elucidation of the mechanism of action of the thyroid gland has led to the development of the antithyroidal agents with which one may inhibit activity of this gland by medical measures other than by surgical removal; the recognition of the influence of the endocrine status of the organism on the appearance and course of enoplastic growths and the availability of hormones which may be administered to bring about changes in the hormonal environment of the tissues has led to the use of the sex hormones in the palliative treatment of certain forms of cancer, most notably, the use of estrogens in prostatic carcinoma and of both estrogens and androgens in mammary carcinoma. The mechanism involved here

(*Continued on page 852*)

†Delivered before the American Pharmaceutical Manufacturers' Association, November 28, 1950.

*Chairman, Department of Experimental Medicine, Southwestern Medical School, University of Texas.

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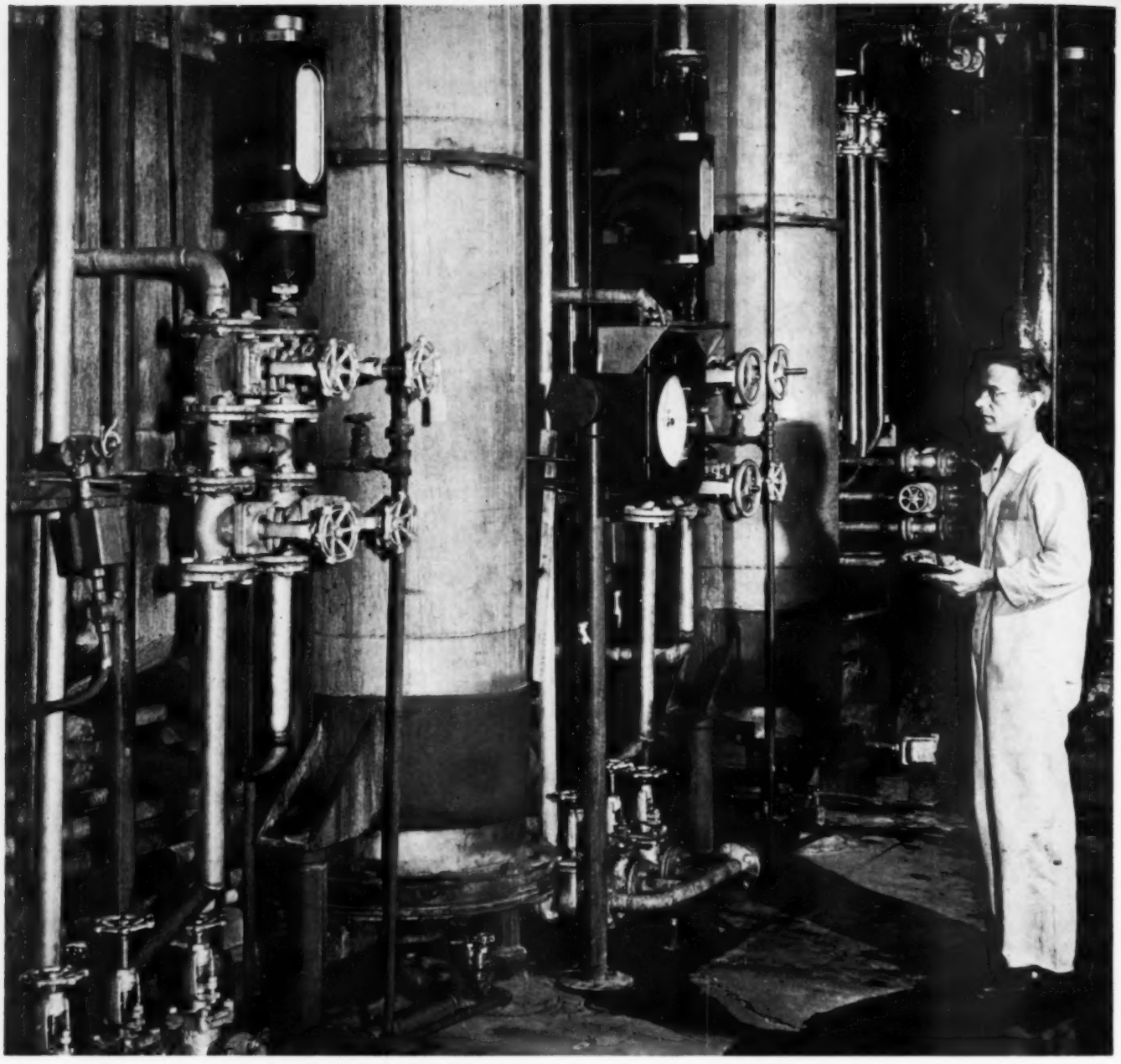

Selective adsorption ion exchange columns at Eli Lilly & Co.

ION EXCHANGE RESINS

By Milton A. Lesser

ONE of the outstanding industrial developments of recent years has been the application of the ion exchange principle. This has been made possible through the production of several new types of plastics in the form of insoluble acids and alkalies. These materials are known as ion exchange resins. The industrial potentialities of these ion exchange resins were well indicated when, during the past decade, they found major use in water conditioning. With increasing appreciation of their capabilities, the application of ion exchange systems spread to other industries, one of which is the pharmaceutical manufacturing field. Aside from their use in drug production, ion exchange resins have begun to assume importance as therapeutic agents, thus opening a new phase of usefulness for themselves.

Singularly enough, the history of the ion exchange principle goes back to 1850 when Way[1] and Thompson[2]

observed that if a solution of one kind of salt, such as ammonium sulfate, is passed into certain classes of soil, the solution recovered after such passage will contain an entirely different kind of salt, such as calcium chloride. These workers were baffled by their observations, but, as explained by Klaas,[3] it is now known that this transformation is effected by a simple swapping of ions, not unlike the changing of partners at a square dance.

The actual application of the basic principle came some years later. According to Davis,[4] earlier forms of ion exchangers made their appearance about 1905 in the form of fused silicious zeolites. These were followed some five years later by zeolites prepared from synthetic silica gel. The use of natural green sand came into the picture about 1920 and in 1930 sulfonated coal was employed in ion exchange units.

When, in 1935, Adams and Holmes[5] announced that phenol-formaldehyde resins exhibited ion exchange properties, they opened a new era of exchange absorbents. In 1940, the Resinous Products and Chemical Co., now a division of the Rohm & Haas Co., Philadelphia, Pa., made available the first synthetic resinous exchangers to be produced on a commercial scale in the United States.[6]

As noted by Kunin,[7,8] the theory and mechanism of ion exchange has been presented in a number of excellent reviews. Hence it will not be necessary to present a detailed discussion of the action of ion exchange resins. The synthetic ion exchange resinous materials, says Herr,[9] may be grouped into two major types. The first, the cationic active type, will exchange or adsorb substances which possess a positive ionic charge or which, because of their electronic configuration, can form positive ions by the addition of a proton, such as the substituted ammonium group. The second, the anionic active type, will absorb or exchange acidic substances. He observes that the gel structure of the resins gives them many of the properties of a highly porous surface-active adsorbent. He also points out that resinous exchangers are insoluble in water and all common solvents.

In less technical language, Klaas[3] explains that in the manufacture of ion exchange resins, the plastic is formed into small granular or bead-like particles, each of which contains numerous acidic or basic groups. When placed in contact with water or a similar fluid, the acidic or basic groups are able to act upon the liquid in much the same manner as if they were dissolved in it as soluble acids or bases. However, because the groups are attached to an insoluble plastic, they do not dissolve in the liquid and therefore may be removed at will.

The technique of ion exchange is often compared[10] to the ordinary double decomposition reaction encountered in freshman chemistry. In double decomposition the two compounds reacting in an aqueous solution "change partners" to form two new compounds. For example, sodium chloride and nitric acid trade ions to form hydrochloric acid and sodium nitrite. However, the products are all soluble and the reaction immediately reverses, so that the end result is a solution with all four products present.

Ion exchange also "trades" ions but the outcome is quite different. Thus a solution of sodium chloride may be converted to a solution of hydrochloric acid of equivalent strength by simply passing it over the proper exchange resin. In the process, the resin trades some of its own hydrogen ions for sodium ions of the salt, and the hydrochloric acid thus formed passes on through the resin to be recovered.

After continued use, the reactive centers of the exchange resins become depleted of exchangeable ions and the point is reached where useful exchange can no longer take place. However, this exhaustion need not be permanent since the resins may be rejuvenated and be employed over and over again. Rejuvenation, or regeneration, is readily accomplished by treating the resin with solutions containing the ions which were displaced during operation. For example, a solution

Filling and capping bottles of "Resion" at National Drug Company.

of sulfuric or hydrochloric acid is passed through a column of the cation exchanger in order to replace with hydrogen the cations that have been adsorbed. If, however, the cation exchanger is to be operated in the sodium cycle, a regenerant solution of sodium chloride is used. The anion exchanger may be regenerated with sodium carbonate, or ammonium or sodium hydroxide, in order to replace the adsorbed anions with hydroxyl ions.[11]

As noted in a manual[12] on the use of these resins, the phenomenon of ion exchange may be studied by either column or batch techniques. In column operations, the resin is packed in a vertical column and the material to be treated is passed through the bed of resin. When a certain predetermined concentration of the material being removed from the influent begins to appear in the effluent, the resin is regenerated. In batch operations, the resin is agitated in a vessel with a given quantity of the solution to be treated. When the concentration of the electrolytes being adsorbed have reached the desired levels, the solution is decanted as the treated product. The resin may then be transferred to a column for regeneration.

The choice of method depends entirely upon the specific application, but, in general, column operations are preferable. This is understandable because ion exchange occurs only to a limited extent in batch operations, whereas practically quantitative exchange may be effected by using the column technique.

In addition to Rohm and Haas, ion exchange resins are also produced by the Dow Chemical Co. (Midland, Mich.), the Permutit Co. (New York, N. Y.) and the Chemical Process Co. (Charlotte, N. C.). A number of patents[13-15] on methods for making ion exchange resins have been assigned to the American Cyanamid Co. (New York, N. Y.). As a matter of fact the recent patent literature[16,17] indicates a lively interest in the development of various ion exchange resins.

Ion exchange resins are generally styrene, but they may also be phenolic-type or amine-type resins.[18] As pointed out by Walton,[19] all synthetic resins consist of long chainlike or weblike molecules, so that they can be made into exchangers simply by building ionic groupings into them and arranging for suitable permeability. Many different types of ion exchange resins are available commerciably. Moreover, it is becoming possible to provide resins that are "tailor-made" to meet the needs of various special processes. This, says he, is accomplished by varying such factors as the degree of ionization, permeability, capacity and selectivity.

Ion exchange resins have found literally scores of applications in industry and science. As previously indicated, their most important use at present is in the conditioning and purificaton of water.[3,19] In many parts of the country, cation exchange resins are being used on a large scale for softening hard waters, which contain appreciable quantities of calcium and magnesium salts. These compounds are responsible for the scale formation that appears in boilers and kettles and for the scum or ring that forms when soap is used.

However, it has been found that most of the troubles encountered with hard waters can be eliminated by exchanging the objectionable calcium and magnesium-ion for sodium ions adsorbed on the resin. The resulting treated water now contains sodium salts, but they do not form a curd with soap or produce boiler scale.

Of course this process actually exchanges one impurity for another, but for many important applications it is quite sufficient to thus condition the water. For some purposes, however, including pharmaceutical manufacture, any impurity in the water is undesirable and water completely free of all ionic materials is required. In the past this could be attained only by distillation. Now, by an ion exchange process known as deionization it is possible to obtain such water inexpensively and efficiently.

In this process, both cation and anion exchange resins are used. One exchanges hydrogen ions for objectionable metal ions, like sodium, calcium and magnesium. The other removes the anions; namely, the chlorides, sulfates and such, and exchanges hydroxyl (OH) groups for them. The result is a water that is free from all dissolved salts.

The efficiency of the process has been further extended recently by a method known as Amberlite Monobed Deionization.[6,20] This requires only a single column containing a mixture of cation and anion exchange resins, with the cation and anion exchange processes going on simultaneously. Since the two resins, differ considerably with respect to density, they can be separated easily for regeneration. After the cation exchange resin has been regenerated with acid and the anion exchange resin with alkali, the resins can be mixed again by bubbling air through the column.

It is said[3] that water of "astonishingly high quality" can be produced by the monobed method. It has also been pointed out[18] that this new system requires smaller and potentially less expensive equipment, is easier to operate, and is capable of more complete deionization than two-bed systems. The application of this principle has led to the development of small portable units for producing high quality water suitable for laboratory work. Small demineralizing units, with a color indicator to signal exhaustion, have also been made available.

Of course, there are limits beyond which this method cannot be applied economically. Thus, while it may be useful for treating brackish waters, containing 1,000 to 10,000 ppm. of salt, it is not appropriate for use with sea water.[18] In this connection it will be recalled that, during the war, compact ion exchangers were part of life-raft emergency kits and served to provide fresh water from sea water.[4,19]

Aside from its value in water treatment, the Monobed system offers promise in quite a number of industries, including the pharmaceutical and biological. For example, mixed-bed systems are already being used for the fractionation of human blood serum.[21]

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ADVANCES IN ANTIBIOTICS†

*By Perrin H. Long, M.D.**

IN THE last year (1949-1950), great progress has been made in the search for further uses for antibiotics of established value and for new antibiotics which have a wide range of action.

While no new important uses have been found for penicillin, opinion has tended to crystallize in relation to the advantages of the various preparations of penicillin, and in respect to how they may be best administered to the patient. It would seem that procaine penicillin G in aqueous suspension, which is administered by the intramuscular route, is a favored preparation for the treatment of most infectious processes. Crystalline penicillin G administered by the intramuscular route in large doses at twelve hourly intervals has proved effective in certain acute infections, and especially in lobar pneumonia. In the opinion of most experts in the field, the use of procaine penicillin G in oil, with 2 per cent aluminum stearate added, should be reserved for the treatment of mild infections, syphilis, and gonorrhea. One outstanding finding is that, currently, a considerable number of strains of staphylococci which are being isolated from infectious processes are resistant to the therapeutic effects of penicillin. Thus, penicillin can no longer be considered the antibiotic of choice for the treatment of staphylococcal infections.

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†Delivered before the American Pharmaceutical Manufacturers' Association

*Department of Preventive Medicine, The Johns Hopkins University School of Medicine.

USE OF GUMS IN COSMETIC PREPARATIONS

By Harry Hilfer

GUMS have been used as thickeners and emulsion stabilizers in pharmaceutical and cosmetic preparations ever since such preparations were made. Their use has been and still is largely empirical, no doubt due to their complicated structures and also because there has not been any real effort made towards isolation of their various constituents so that they may be studied by themselves as well as in relation to each other. They are generally classified as carbohydrates, usually pentoses, but contain in addition varying amounts of carboxy and sulfonic acid groupings. In addition to these natural compounds, synthetic gums are now being produced commercially, these latter being largely cellulose derivatives, most notable of which are methyl cellulose, hydroxy methyl cellulose, carboxy methyl cellulose and ethyl cellulose. No one of these materials is capable of being used in any type of preparation, but they each have their own peculiar properties which enable them to be used for any specific effects.

The natural gums are characterized by being composed of complex molecules of sugars and carboxy acids, the ratio of sugars to carboxy acids having some bearing on their properties. A further distinction is made between soluble gums and insoluble gums, this distinc-

tion being one of convenience rather than one of basic difference. For example, acacia appears to dissolve in water—thus thickening the solution, while tragacanth seems to absorb water and swell to a gelatinous mass as a result.

The natural gums in greatest use in cosmetics have been acacia, tragacanth, Irish moss and quince seed. Used to a smaller extent are substances such as gum carob which is not strictly speaking a gum since it is proteinaceous in character. They all have in common a characteristic insolubility in alcohol and an ability to thicken water solutions. However, they are also subject to a good many incompatibilities with other substances and in many cases with each other. Like a starch they are further capable of reaction with glycerol or other polyhydric alcohols to form the corresponding glycerite. Indeed their reactions with glycerol proceed at a greater velocity and at lower temperatures, than does starch.

Hair dressings, particularly those of the non-oily type, usually depend on gums as a means of keeping the hair in place. Though the gums included in this category consists of arabic and tragacanth, quince seed perhaps does the best job. Quince seed mucilage is prepared by soaking the quince seeds for 24-48 hours in cold water and then separating the mucilage by straining through a fine meshed cloth or by centrifuging. Centrifuging does the better job since by this means small brown specks which would ordinarily go through the cloth are forced to the bottom of the container and a relatively clear mucilage may then be separated. In most general practice, the mucilage is made from 2.5 per cent of the seeds by weight. Actually the amount of extract is usually about 20-25 per cent of the weight of the seeds. Cold water is recommended for extraction purposes, because other components are extracted with warm water which do not possess the qualifications desired in the mucilage and may cause the mucilage to become dissolved. The mucilage seems to be a highly desirable food for bacteria and molds and should therefore be adequately preserved. Formaldehyde is commonly used for this purpose. The mucilage may then be used in the desired preparation either as such or diluted further with water additions. The greatest advantage possessed by quince seed lies in its ability to hold the hair in place and to be incapable of flaking after water evaporation and after application. This is direct opposition to tragacanth and acacia.

Quince seed has also found marked favor as an emulsion stabilizer, particularly in hand lotions. When used in a 20-50 per cent concentration, based on the 2.5 per cent mucilage, it is capable of markedly stabilizing emulsions which would otherwise separate or cream on standing. It further helps the emulsion to retain its fluidity where without it, it would tend to stiffen so that it would have to be shaken before pouring. This latter effect is an interesting one since the mucilage actually thickens the system, but its addition apparently prevents a thixotropy from setting in. The other gums are also capable of much the same mechanism, but in the author's opinion not to the same extent.

The inclusion of quince seed is always a rather troublesome procedure because of the processing necessary beforehand and because since it is a natural product there is no assurance of uniformity in the seeds from batch to batch. This difference from crop to crop may make itself evident in the final product unless a correction is made in the formula which will compensate for the difference. The seeds themselves are also subject to attack from weevils, and large shocks of them have had to be destroyed or treated with gas to destroy the weevils. The tendency has therefore been to use other substances rather than quince seed as stabilizers.

Irish moss extracts have been fixtures or stabilizers and thickening agents for a good many years. Relatively recently, dried extracts have appeared on the market the use of which is rapidly increasing. The chemical structure of these agents was the subject of a paper given at the May meeting of the Society of Cosmetic Chemists by the research director of the Algin Corporation of America. This material, characterized by the inclusion in its molecule of a sulfonic acid grouping, is capable of thickening and stabilizing emulsions to a very marked degree. In addition, the metal anion used has a profound effect on viscosities. The carrageens have found a place for themselves in lotions and relatively large quantities are used in dentifrice pastes, as thickeners and stabilizers. The carrageens have rather a unique property, in addition, of being able to stabilize emulsions of acid pH's, if the pH range is greater than 4, and have therefore found to be a good addition to anti-perspirant preparations.

Tragacanth and arabic, particularly tragacanth, are being used in dentifrices as well, but though they do very well in the soap type or alkaline type of pastes, they do not seem to behave as well at a neutral or acid pH. They are used to a certain extent in hand lotions to thicken, but to a much larger extent as suspending agents for the dispersed phase in lotions containing high alcohol concentrations. A relatively stable system can be formed by the use of water, alcohol, and mineral oil for example, in which the alcohol causes a partial precipitation of the tragacanth to a point where it thickens to stabilize the suspension. Tragacanth, further, is used as a binder for pressed powders such as rouge and face powder compacts.

A discussion of gums should also include materials such as the synthetic cellulose derivatives. The first of these commercially available was the methyl cellulose as a thickening and suspending agent. Methyl cellulose, however, has the peculiar property of precipitating when the temperature rises too high and in fact would precipitate from a system incorporating it when heated to the boiling point of water. Therefore, though it acted as a stabilizing influence in cooler temperatures, its abilities in that direction decreased with temperature increases. Its appearance, however, was welcomed by cosmetic manufacturers since it was dependable in

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ENTERIC COATING OF TABLETS

By Ronald Clarkson

We are now in the process of publishing an authoritative text on Tablet Coating. This book has been written by Ronald Clarkson, an outstanding tablet consultant with offices in Philadelphia. This article constitutes one of the many interesting chapters of the forthcoming book which sets forth all phases of tablet coating in plain language.

ENTERIC coatings are applied to tablets to prevent disintegration in the stomach and yet permit fairly rapid disintegration or solution in the intestinal tract.

There are several reasons for enteric coating, the most important being more or less protective measures against such medicaments that if released in the stomach might cause severe nausea, irritate the gastric mucosa, form incompatible compounds or be rendered physiologically inactive by the gastric juices.

Another very important reason is where it is essential or desirable to deposit in the intestinal tract a specific medicament in concentrated form, such as vermifuges, intestinal prophylactics, etc.

As the stomach contents are normally acid and the intestinal fluids normally alkaline it was generally supposed that materials which were insoluble or almost so, in acid media and at the same time possess the property of dissolving fairly rapidly in alkaline media would be satisfactory for enteric coating. This theory has been both disapproved and approved by various investigators.

It is not my intention to review the physiological aspects of enteric coating, to do so would constitute a book in itself. Many papers have been published covering investigations of various materials and there appears to be considerable difference of opinion on the subject. For a list of papers refer to U. S. Dispensatory—24th edition, page 1178.

One important point to bear in mind is that the human stomach varies considerably both as to the pH of the gastric juices and the length of time that food is retained in the stomach.

It would be impossible to go around testing every batch of enteric coated tablets or human controls, therefore laboratory controls must suffice for the most part. After satisfactory results are obtained by these methods, clinical tests can then be conducted if so desired.

To the best of my knowledge the consensus appears to be that if an enteric coating is resistant to artificial gastric juice for a period of 3 to 5 hours and soluble in synthetic intestinal fluid within a period of 40 to 60 minutes it can be considered satisfactory.

Many materials, such as keratin, salol, fatty acids and various types of resins have been used, and in some cases combinations of resins and fatty acids have been tried with varying degrees of success.

Probably the most widely used material is arsenic free shellac. Based on the theory that shellac is acid insoluble or resistant for a limited time and that it is soluble to a certain extent in water in the presence of

alkalies. Furthermore the process is relatively simple.

The strength of the solution generally used is 6 lbs. shellac per gallon of alcohol and the method of application is exactly the same as described in the previous chapter, except that to produce enteric characteristics a greater number of coats are required.

The number of coats can only be found by experimenting, as there are many factors to be considered, chief among these are the technique of the individual coater, the size and shape of the tablets and the batch sizes. Generally speaking I would say that at least 10 to 12 coats should prove adequate, but this figure should not be taken too literally.

Many coaters prefer to use a thinner solution of 4 lbs. per gallon and apply a correspondingly greater number of coats. The theory being that there is a better chance of eliminating pin holes. In my opinion the thickness of the coating over the edges is the determining factor, which in turn is controlled to a great extent by the degree of convexity of the tablets.

Let us say for example that 10 coats of the solution have been applied and that the convexity of the tablets is not too great. Actually we may only have the equivalent of 6 or 7 coats on the edges. Quite naturally the gastric juices will exercise the most effect at this point, therefore the number of coats will have to be governed on this basis.

It is often advantageous to apply a couple of subcoats to the tablets to round out the edges before applying the enteric coating, so that a more uniform film thickness can be realized.

Another formula of similar type to shellac is a combination of shellac and sandrac—as follows:—

Arsenic free shellac	**3 lbs.**
Gum Sandrac	**3 lbs.**
Anhydrous Alcohol (3A or 23A)	**1 gallon**

Prepare in same manner as shellac solution, but it is advisable to strain through muslin before using, as gum sandrac often contains foreign matter.

Both the shellac and shellac-sandrac solutions can be plasticized with a small amount of castor oil if so desired on the basis ½ oz. to a pint of finished solution.

Again the number of coats must be determined by experimenting, but should be considerably less in this case than the straight shellac solution.

Another enteric coating, a combination of resins with a fatty acid embracing the idea of acid insoluble resins and the time factor for disintegration exhibited by fatty acids in general, has proved to be satisfactory.

The process is somewhat more complicated and requires more time than the previous examples. It consists of the application of two separate solutions with a dose of subcoating powder between each application.

The formulae are as follows:—

Solution "A"

Cetyl Alcohol	**9 lbs.**
Gum Sandrac	**24 lbs.**
Anhydrous Alcohol (23A)	**40 lbs.**

Agitate until dissolved—strain through muslin.

Solution "B"

Balsam of Tolu	**25 lbs.**
Acetone	**12½ lbs.**

Directions

Heat the tolu on a water or steam bath until softened. Then add the acetone, continue heating with stirring until solution is complete. Strain through muslin. Allow solution to cool before using.

Dusting Powder

Kaolin	**50 lbs.**
Talc	**20 lbs.**
Powdered Sugar	**22 lbs.**
Powdered Acacia	**8 lbs.**

Directions

Mix well and pass through No. 100 mesh bolting cloth.

Directions

Apply a dose of solution "A" so that all the tablets are covered uniformly. Allow to roll until they reach the tacky stage, then apply the dusting powder. Allow to roll for about 10 minutes to give sufficient time for the dusting powder to smooth out. Then turn on the hot air, gradually increasing the volume. When all the alcohol has flashed off and the tablets are dry, which may require about 10 to 20 minutes, the next application can be made.

This time solution "B" is applied, followed by the dusting powder when the tablets become tacky. Allow to roll 10 minutes or so, turn on the hot air and keep rolling until tablets are fairly dry. Apply 2 doses of each solution in this manner. Then remove the tablets from the pan—spread on trays and place in a dryer overnight at a low temperature of around 100° to 110°F.

Repeat this procedure until at least 10 coats (5 coats

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A.P.M.A.

FOLLOWING a discussion by the Association General Counsel Charles Wesley Dunn of the Durham-Humphrey Bill introduced at the instigation of the N. A. R. D. to clarify the prescription problem, and backed by the Food and Drug Administration, the American Pharmaceutical Manufacturers' Association passed a resolution condemning a specific provision of the bill. The resolution, reads:

Be it resolved that the American Pharmaceutical Manufacturers Association, in convention assembled, does hereby condemn and therefore oppose the provision in the Durham (H. R. 8904)—Humphrey (S. 3852) bill now before Congress to amend Section 503 (b) of the Federal Food, Drug, and Cosmetic Act, which authorizes an administrative determination of what drugs should be dispensed on a prescription basis and what drugs may be dispensed on a non-prescription basis. This provision is thus condemned and opposed, because (1) it is not necessary and (2) it is basically unsound in the circumstances. But the Association will otherwise cooperate in a due revision of the prescription drug law contained in Section 503 (b), in order that it may better accomplish its objective to protect public health.

The high point of the Mid-Year Meeting of the A.P.M.A. was the Scientific Award program on Tuesday, November 28, and the award dinner in the evening. Speakers on the Award program were the presiding officer, Dr. Austin Smith, editor of the Journal of the A.M.A. who spoke on Medical Research Vistas; Dr. Sidney O. Levinson, Executive Director, Michael Reese Research Foundation, Chicago, on Practical Considerations of Infectious Hepatitis and Homologous Serum Jaundice Dr. Ephraim Shorr, assistant professor of medicine, Cornell Medical College, New York, on the participation of Vascular Factors of Liver and Kidney Origin in Hypertention; Dr. Rulow W. Rawson, chief, Division of Clinical Investigation, Sloan-Kettering Institute for Cancer Research, New York, on The Contributions of Newer Techniques to Our Knowledge of Thyroid Tumors; Dr. Perrin H. Long, professor of preventive medicine, Johns Hopkins University School of Medicine, on Research Progress in Antibiotic Therapy; Dr. Joseph E. Smadel, Army Medical Department. Research and Graduate School, Washington, on Research Progress in the Drug Treatment of Typhus and Typhus-Like Diseases; Dr. Arthur Grollman, professor and chairman of the Department of Experimental Medicine, Southwestern Medical School, University of Texas, Dallas, on Research Progress in Endocrinology; Dr. William S. Tillett, professor of medicine, N. Y. University College of Medicine, on Streptokinase and Streptodornase in the Treatment of Infection.

MEETING

The Award Ceremony dinner, attended by five hundred men and women, was presided over by A.P.M.A. President Howard B. Fonda, Senior Vice-president of Burroughs Wellcome & Co. (U. S. A.) Inc. After his introductory remarks in which he extended the thanks of the Association to Lee Klemmer of Modern Medicine who was chairman of the dinner committee, to the Association Counsel Charles Wesley Dunn for his great interest in the Association for the past thirty-eight years, to Dr. Austin Smith and Dr. Perrin H. Long for their work in arranging the meetings of the day and in obtaining the excellent speakers from the medical profession, Mr. Fonda introduced Dr. Leonard A. Scheele, Surgeon General of the U. S. Public Health Service, who presented the 1950 Scientific Award to Dr. Philip S. Hench, professor of medicine, University of Minnesota (Mayo Foundation), and Dr. George W. Thorn, Hershey Professor of the Theory and Practice of Physic, Harvard Uniyersity Medical School. The Award was presented to Dr. Hench for his fundamental medical research on Cortisone, and to Dr. Thorn for his fundamental medical research on ACTH.

In accepting the Award, Dr. Hench—who was leaving the following day for Stockholm to receive the Nobel Prize, said in part:

"Representing my colleagues of the Mayo Clinic and Mayo Foundation, especially my departmental associates and co-workers, Drs. Charles Slocumb and Howard Polley, I am very happy to share with Professor George Thorn of Harvard Medical School, the 1950 Scientific Award of the American Pharmaceutical Manufacturers' Association. Reflecting your sympathetic interest in the physiologic and clinical researches being done at our two institutions it will serve as a stimulus to all who are trying to harness the forces of the two new powerful substances (cortisone and ACTH) for the benefit of the sick.

"But Doctor Thorn and I are only the children and heirs of our scientific forebearers. We delight to pay homage to whom homage is due, to the pioneering physiologists and chemists who gave us these awesome research tools, to Drs. Kendall, Reichstein, Sarett and their associates who gave cortisone to the world; to Drs. Evans and Li, Collip, Sayers, White and Long, and their associates who gave us ACTH.

"Medicine, especially during the past 25 years, has been happily and fruitfully united by a double bond to the chemical and pharmaceutical industries. For medicine has been receiving its finest weapons from the hands of the chemists, and the chemical and pharmaceutical industries (*Continued on page 846*)

THE MEDICAL CONVENTION PROBLEM

*By S. M. Fossel**

WE HAVE long felt the need for a re-evaluation of medical conventions. We decided that the answer to the problem may lie in more thought, not more money. Based on such thought, several conclusions were reached in regard to exhibit-booth practices now generally followed. These conclusions were tested at four state conventions during the past year, and doctor reaction has been so favorable that we are in the process of modifying all our convention procedures, and applying the lessons learned to hospital exhibits, detailing, journal advertising, and our literature.

We started from the assumption that the primary purpose of a medical convention is to keep doctors abreast of the latest developments in medicine. We

refuse to agree that such a view is either outmoded or naive. With this in mind, the following changes were instituted:

The booth itself was made to serve as an appropriate back drop for scientific information. It consists of a series of charts, medical illustration and diagrams mounted on plywood. We found that in this manner we attracted the physician's attention to reliable scientific information rather than to gadgets and beautiful but expensive exhibits with very little value to the practicing physician.

No commercial literature was distributed. Special brochures were made available which dealt exclusively with data which the doctors needed to enable them to achieve the best therapeutic results from the use of our products.

No samples were displayed or given out, unless specifically requested.

No enticing techniques were employed to lure visiting physicians into the clutches of representatives; thus the doctors examined the exhibit at their leisure and did ask questions if more detailed information was desired, which often resulted in extensive discussions on the product and the research behind it.

No written registration was solicited, although a count was made unobtrusively, of each worthwhile discussion with a physician. Attendance ran more than five times the number we normally registered. Typical comment from an unbelieving doctor was, "You mean I don't *have to* register?" Frequently they returned with a friend to show the exhibit.

Unquestionably, there are obligations to be assumed by the sponsors and managers of medical conventions. However, it is the responsibility of the pharmaceutical manufacturers to make the technical exhibit section of medical conventions as interesting and desirable to physicians as the papers being presented in the convention hall. Our section of the convention will not be avoided by the doctor if he finds it worthwhile.

In this regard, the meetings are attended by too many extraneous people. Only M.D.'s, internes, and residents should be admitted to the exhibit floor, as is the case with the attendance at the presentation of papers by the physicians. Manufacturers of products that are not strictly medical and of an ethical nature should be eliminated or segregated.

The pharmaceutical industry is responsible for the doctors' attitude toward technical exhibits. There is resentment on the part of the physician at being requested to register whenever he shows the most casual interest at an exhibit. The deplorable condition exists at most meetings which necessitates the medical society chairman to request all doctors to visit the technical exhibits and register to "show their gratitude to the manufacturers for making their meeting possible." Duty is fine in its place, but this condition can be eliminated so that the current prevalent feeling that medical exhibits are a necessary evil will be eradicated.

Asking for registration is unnecessary. A doctor who wants samples or literature sent to his office will insist that you take down his name and address. As for the balance of his colleagues, their names are readily available at reasonable cost and in a manner that will not prove annoying.

We believe it would be much better to create a positive attitude on the part of the doctor by presenting useful, scientific information in a well-organized fashion. It has been our experience that this can be done satisfactorily and that it will be well received when the scientific exhibit type of presentation is used. In our opinion there is no reason why the technical section of the medical meeting cannot become as popular and highly thought of as the section controlled by the physicians themselves in presenting their papers on medical experiences and research.

With the tremendous wealth of information, talent and research laboratories which we have in our own pharmaceutical organizations, we should and must contribute a really worthwhile program of our own to the local, state and national medical meetings. Experience has taught us that the use of highly sales-minded personnel at exhibits, the giving of gadgets and various types of gifts, the use of extremely expensive and attractive commercial types of exhibits are not the answer. Physicians have shown us whole-heartedly that they do not like the county fair attitude and they are actually in a polite manner revolting against the whole system. I think it is time that we as pharmaceutical manufacturers wake up and do something constructive about it. We are not suggesting that scientific exhibits are the only answer; they are simply the only answer we have found effective.

I believe you will agree that the best answer is results and we are convinced that we are securing extremely favorable results with our present attitude on medical conventions.

*Assistant Manager, Sandos Pharmaceuticals

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PACKAGING AND SELLING

CO-OP AND DISPLAY

There is a rumor in the trade that a few of the large retail stores have discovered a new department which they believe could be made into a top performer in making net profits. This department requires no investment, carries no inventory, uses little or no floor space and a very limited personnel. This new department now to be organized for profit is a cooperative advertising and display department.

For quite a few years now leading department stores have had more money for cooperative advertising pushed at them than they could spend. The cosmetic industry has been a star performer in this respect. The retail stores which have been at the receiving end of this huge flow of money have spent what they could, very often in a slap-happy, casual fashion, and almost always with a lot of complexes having to do with store policy and administrative methods which went a long way toward decreasing the value of this cooperative advertising. Now, however, we hear that store management in a few cases has suddenly decided that if cooperative advertising were properly handled as a profit producing operation in the store that it could add a very juicy profit to store operations at a time when profits are very hard to come by in the department store field.

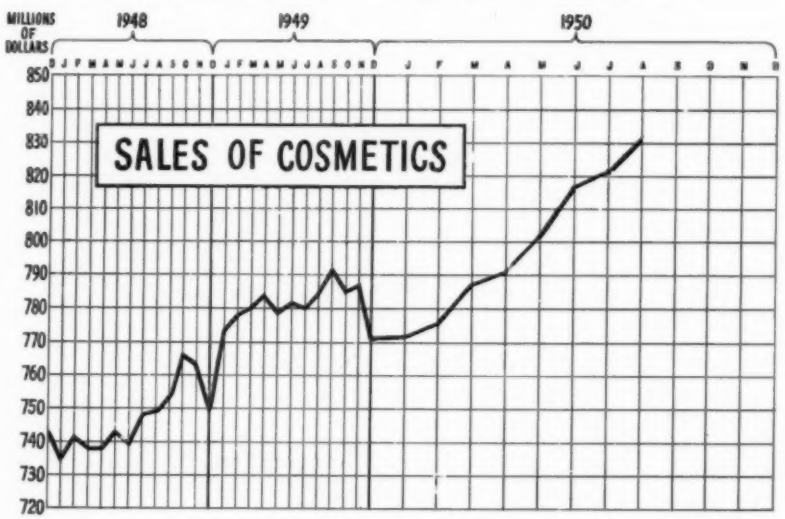
It is almost always impossible for a manufacturer or his advertising agency to find out what price a store is actually paying for advertising space. The bigger the store the more mystery surrounds this price per line advertising dollar. Manufacturers make some attempt to estimate the local rate by country averages and other indications, but they have no way of feeling any assurance that they come within 10 per cent or 15 per cent of this rate and even if they knew they were within fairly accurate limits, hardly any manufacturer is willing to face the store when the store announces its cooperative rate.

Nowadays when a salesman walks into most leading stores he will find the buyer, the merchandise manager, the advertising manager and other store executives, even in some cases salesgirls, have the price of the cooperative rate on the tip of their tongues. This rate is very clearly passed down the line as the rate to be given to the soliciting manufacturer. In addition to the cost of space, many leading stores have a policy in advertising and display and in every other kind of external effort by the store which must make everything the store does conform to a definite store personality.

In many cases in order to get somewhere near an effective advertisement manufacturers have been using, or are compelled to use, the store advertising department for all preparations of copy, illustrations, cuts, etc. For these services the manufacturer is of course charged a fee. In the eyes of some management all of this adds up to a net profit which can lick the pants off the net profit of any one department in the store and all this at no investment of capital. So why not go out and encourage and solicit more business of this kind?

If cooperative advertising can become such a profitable operation for a store, some managements can't see why display should not be an equally lush addition to their profits. As the display director of a leading store recently said, "Each store should have adequate amounts of advertising aids to put across the manufacturer's story, but this medium should be a supplement to the style and character of display which sets one store apart from another store. America's leading stores have

Retail sales of cosmetics for the twelve months ended with August 1950 totaled $832,336,000. This compares with $822,837,000 for the twelve months ended with July 1950 and with $784,234,000 for the twelve months ended with August 1949.



used a minimum of manufacturers' selling aids. They have developed and grown big with their own distinctive policies which govern all operations, and their displays have reflected their individual character."

Just to show what a completely juicy market this could be for a store if they go into the display business in a big way, this individual continues, "If the largest store in America had six times the floor space it now occupies that increased area would not hold a fraction of the tons of manufacturers' selling aids pumped in each year. Select any store and ask what it does with the excess material."

There is, of course, a colossal waste in not putting display into effective use and practically everyone is familiar with this waste, but just to show how a store can really do a job for an extravagant manufacturer this man continues, "I have a letter from one ad agency offering the store $100.00 to put up a manufacturer's sign in a selling department—no details as to size—just put the sign up in any manner we would choose. We have had a tough time actually spending the amount—the allowance was entirely too liberal."

We have stated here many times that cooperative advertising and point-of-sale display are the most extravagantly used, most carelessly employed, most wasteful form of advertising of all the multiple forms of sales promotion. At the same time, we believe that these two selling mediums when properly used and followed through are by far the most potent and effective sales promotion media for stimulating sales, activating distribution, building volume and getting consumer action, interest and good-will.

Perhaps if the big retailers organize this enormous flood of wasteful dollars for a cold-blooded, profit-making operation for their stores they would then feel obligated to a greater extent to properly use this material and to properly synchronize it with sales. If that took place, their moderate fee would be a very cheap investment for the manufacturer.

More Vending

The vending machine business will expand mightily during the next few years according to speeches at the National Automatic Merchandising Association's Convention.

Reasons—an expected shortage of sales personnel in retail stores, due to mobilization, defense work etc.

How about long hours and short time for shopping. The machine, properly placed, as in a factory is retailed last word in shopping convenience.

Deodorant—Drug or Cosmetic

Deodorants have been a very rapidly growing, thriving part of the cosmetic business during the last 10 years. This period may be classified as the real coming of age of deodorants as a volume product for both men and women.

Now it appears that the drug branch of the trade is going to threaten the cosmetic people with the new chlorophyll deodorants. Promotion is beginning to gear up into big space for these products very much in the way that we saw the antihistamines launched.

Ennds, a product of the Pearson Pharmacal Company, is now in the market in magazines and newspapers and with plans for radio and television.

Stoppers, a product of Stoppers, Inc., has completed a test campaign in Connecticut and is moving into New York state. Spot television has been used.

Nullo made by De Pree of Holland, Michigan, is a product which was mentioned in the Reader's Digest a few months ago. Nullo is said to have national distribution.

B-Shur, a product of Woodley Co., Chicago, is said to have done no national advertising so far, but to have already secured national distribution.

As an example of the way in which the retail trade appears to be accepting these new products, one of them is said to have secured immediate national chain distribution, preceding samples or advertising, by telephone calls to buyers.

These chlorophyll deodorants advertised to the public are following ethical products into the field very much as the antihistamines did.

It was in 1947 that the Walker Vitamin Company of Mt. Vernon introduced Alodex and at that time applied for a patent. Three companies are said to be licensed so far by this patent, that is the De Pree Co. with Nullo, Pittman Moore with Chlorodor and Charles Frost of Montreal with Sudrana.

Hair's a Poppin'

Test campaigns for new products are popping over all of the country. Toni is now conducting a Nebraska campaign for Viv, its new deodorant shampoo, and another test for a liquid cream shampoo, White Rain, in the Denver area.

Revlon is running a 90 day test on its Snow Creme, "the whipped cream shampoo," in two Indiana cities and one in Illinois. Rapidol Distributing Corp. is now running a campaign in 30 major markets on its color shampoo.

As hair treatment is by far the most active and thriving part of the cosmetic industry, shampoo as a division of this field is very plainly the robust growing division. Following hard upon shampoo, as it seems now, is the variety of products appearing on the market for hair coloring.

It is reported that Revlon's new shampoo is packaged in an aerosol container and that is the reason for the descriptive phrase, "whipped cream shampoo."

Blensol made by Rapidol is a color shampoo. Viv is a deodorant shampoo and White Rain is a liquid cream.

Look!

News-type photographs used in toiletries advertising are attracting 35 per cent to 40 per cent more readership than line drawings, the drug group of the Association of National Advertisers was told in a report on a continuing study of newspaper advertising.

Dentists Make a Billion

The dental profession has joined the ranks of the billion dollar income groups, according to Peter Andrews, former government economic advisor, in a study prepared for a Merck report.

According to this report, dental income has doubled since 1940 and quadrupled since 1933. Over 80,000 dentists now practice in the United States as compared to 79,601 in 1940.

Dental income which should approximate $1,100,000 in 1950 does not include dental equipment and materials. This year expenditures for dental equipment will approximate another $150,000,000.

Windows and Advertising

Leon A. Harris, Jr., vice president and promotional manager of A. Harris & Co., Dallas store, believes that a window can beat an advertisement any day in selling goods.

If a choice must be made between having either the best set of windows or the best newspaper ads in Dallas, according to Mr. Harris, he would take the windows.

In spite of this belief, a breakdown of the million dollar advertising appropriation of this store shows that 63 per cent is spent in two Dallas newspapers, while 5.5 per cent is spent on window displays.

Package Supplies

Concern over material supplies has many branches of the packaging industry, both production and consumption, agitated.

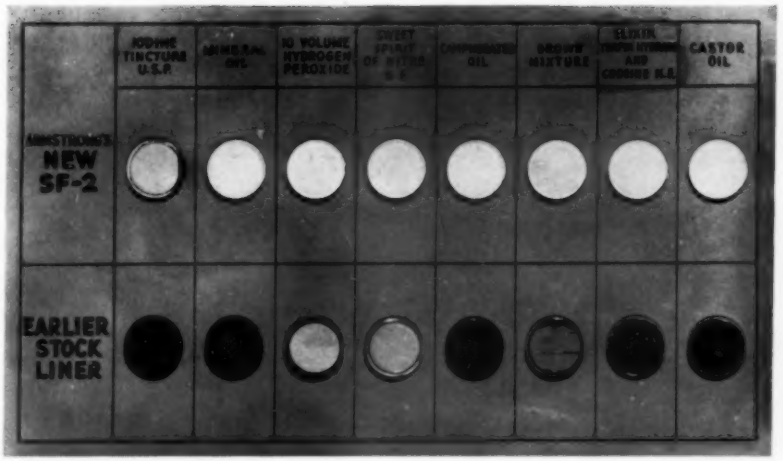
Elmer E. Mills, Chairman of the Injection Moulders Committee on National Security of the Society of the Plastics' Industry, Inc., stated recently that 900 plastic injection moulders are affected by the shortage of polystyrene plastic mould powder. Mr. Mills, also president of the Elmer E. Mills Corp. of Chicago, stated that there has been a tremendous expansion in manufacturing facilities in recent years. "Numerous plants have added additional capacity which requires twice as much polystyrene mould powder as before, while other plants are in the midst of installing additional equipment and larger equipment."

As allocations for polystyrene plastic raw materials are based on last year's requirements, many firms are not receiving enough polystyrene mould powder for their present operations nor for their expanded capacity. Suppliers of raw materials have been keeping up with demand, according to Mr. Mills, until the increase in synthetic rubber output diverted the necessary supplies. Styrene, a necessity in making synthetic rubber, is becoming scarce for this reason.

During the summer plastic raw material manufacturers operated to full capacity, produced 75,185,000 pounds a month of all kinds of plastic mould powder. Of this total, 23,138,000 pounds were polystyrene, which is being cut back to 17,000,000 pounds a month for moulding purposes. This compares with an anticipated requirement of 30,000,000 pounds a month when all of the new mould equipment, now being installed, is in operation.

The glass industry which is just recovering from the soda ash strike now faces the uncertainty of expanding chemical and war uses for this material. Soda ash is one of the items on the Inventory Control List. It is expected however that the food and drug industries will receive priorities over the beverage industry.

Cartons and packaging supplies can be put on the critical list as papers of all grades are becoming scarce and have had a large price increase. Government orders for priorities and preferences are possible here. Tightening of the metals, particularly brass and aluminum, steel and tin-plate cast a shadow of real uncertainty over closures, lipstick cases, compact cases, containers and many other uses in packaging.



New Liner Facing Material

The Standard Insulation Company, working with the Dow Chemical Company and Armstrong Cork Company Glass and Closure division has developed a new prescription liner facing material called SF-2, described as a more nearly universal facing than any used heretofore. It is a pigmented saran film bonded directly to a specially processed newspulp.

During the study and testing of hundreds of various lining materials, almost 50 different samples of saran were evaluated and most were found to lack the necessary resistance qualities or other important characteristics. The photograph shows the results of eight of the many common drug products tested on SF-2 and the former liner facing material.

The new liner is described by Armstrong chemists as without doubt superior to any previously available. In a series of tests, it was found to have a total chemical resistance rating of 96 compared with 74 and 80 respectively for two of the foremost materials previously used.

The SF-2 liner is also claimed to have excellent mechanical characteristics, permitting highly efficient sealing, in addition to permitting easy removal of the caps.

Chix

We hear that our French friends are going to town in quite a big way with baby chicks. Contrary to what you are thinking, over there the chick in embryo, at some stage of development in the shell, contains a hormone that can be incorporated in a cream. Reports say that sale of this cream is zooming and that the public really fancies this idea.

Three companies are supposed to be making the hormone from embryo chicks. One is said to be in this country talking to manufacturers.

Taxes

It is seldom that there is any particular cheer in tax reports. The perfume and cosmetic folks in this industry cannot help but feel cheered by the October excise tax collections which total $7,900,315 or $1,139,906 more than the $6,760,409 collected in that month last year.

The Red and the Blue

Most of us at some time in recent years have collided with the "black market" and nearly all of us have at least heard about the "gray market."

Now a leading steel executive has discovered the "red market." "Anyone in the steel-consuming industry taking advantage of his purchasing power to procure more than he needs is creating a red market." "Such an individual," said this executive, "might as well ship the steel to Stalin himself."

Nobody as yet has mentioned the "blue market" which we would define as the situation in which a poor guy finds himself when he can't get enough of any kind of product to take care of the legitimate needs of his regular customers.

Changes for Design

According to Howard Ketcham, industrial designer and color engineer, a return to simplified design styling for many items is due because of possible shortage of many packaging "extras."

The result will be a much greater emphasis on color.

See anything you like?

What's your product? If it's in the proprietary and toiletries fields, Continental has a first-rate container for it.

Our line includes slide-cover boxes in a variety of heights, and hinge-cover boxes in many sizes. We have round friction plug cans for miscellaneous household products, sifter top cans in round, oblong and oval shapes for all kinds of powders, as well as a wide assortment of round lock top cans—some with and some without inner seal—that are excellently adaptable to many dry products.

Only a few Continental cans are shown here. You'll find there are many, many more — and among them there may be just what you're looking for. Our lithographers are ready to turn out a job that will do your products proud. It costs nothing to talk things over — why not give us a call?

You can't beat Continental as a dependable source of supply!

CONTINENTAL CAN COMPANY

Eastern Division: 122 E. 42nd St., New York 17 Central Division: 135 So. La Salle St., Chicago 3 Pacific Division: Russ Building, San Francisco 4

U. S. Population

The official United States population figure has just been set at 150,697,361.

State figures which have just been issued are as follows:

	1950 Population	Per Cent Change
U. S.	150,697,361	14.5
New England	9,314,453	10.4
Middle Atlantic	30,163,533	9.5
East North Central	30,399,368	14.2
West North Central	14,061,394	4.0
South Atlantic	21,182,335	18.8
East South Central	11,477,181	6.5
West South Central	14,537,572	11.3
Mountain	5,074,998	22.3
Pacific	14,486,527	48.8
New England:		
Maine	913,774	7.9
New Hampshire	533,242	8.5
Vermont	377,747	5.2
Massachusetts	4,690,514	8.7
Rhode Island	791,896	11.0
Connecticut	2,007,280	17.4
Middle Atlantic:		
New York	14,830,192	10.0
New Jersey	4,835,329	16.2
Pennsylvania	10,498,012	6.0
East North Central:		
Ohio	7,946,627	15.0
Indiana	3,934,224	14.8
Illinois	8,712,176	10.3
Michigan	6,371,766	21.2
Wisconsin	3,434,575	9.5
West North Central:		
Minnesota	2,982,483	6.8
Iowa	2,621,073	3.3
Missouri	3,954,653	4.5
North Dakota	619,636	-3.5
South Dakota	1,652,740	1.5
Nebraska	1,325,510	0.7
Kansas	1,905,299	5.8
South Atlantic:		
Delaware	318,085	19.4
Maryland	2,343,001	28.6
District of Columbia	802,178	21.0
Virginia	3,318,680	23.9
West Virginia	2,005,552	5.4
North Carolina	4,061,929	13.7
South Carolina	2,117,027	11.4
Georgia	3,444,578	10.3
Florida	2,771,305	46.1
East South Central:		
Kentucky	2,944,806	3.5
Tennessee	3,291,718	12.9
Alabama	3,061,743	8.1
Mississippi	2,178,914	-0.2
West South Central:		
Arkansas	1,909,511	-2.0
Louisiana	2,683,516	13.5
Oklahoma	2,233,351	-4.4
Texas	7,711,194	20.2
Mountain:		
Montana	591,024	5.6
Idaho	588,637	12.1
Wyoming	290,529	15.9
Colorado	1,325,089	18.0
New Mexico	681,187	28.1
Arizona	749,587	50.1
Utah	688,862	25.2
Nevada	160,083	45.2
Pacific:		
Washington	2,378,963	37.0
Oregon	1,521,341	39.6
California	10,586,223	53.3

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of September 1950 as compared with the same period in 1949.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+11	+5	Minneapolis	+6	+13
Baltimore	+4	+2	Milwaukee	+7	+9
Birmingham	+15	X	Newark	+9	X
Boston	+6	+7	New York	+7	+1
Chicago	+4	+4	Philadelphia	+9	+4
Cincinnati	+14	+10	Pittsburgh	+16	+9
Cleveland	+14	+10	Providence	+13	+5
Dallas	+9	+20	St. Louis	+10	-1
Detroit	+11	+10	San Francisco	+13	+7
Los Angeles	+12	-1	Seattle	+9	+11

The Paste They Love to Taste

The tooth paste people should be convinced by this time that the public is willing to accept new ideas in tooth paste and believes that they are possible. After several years of a relatively status quo condition, except for variation in sales volume among established competitors, things have certainly been happening that make this anything but a static branch of the industry.

All of these new developments in tooth paste have been the end result of so-called scientific progress. The Tasty Tooth Paste Corporation of Mount Vernon provides an excellent example that success may lie in other directions.

From all reports this new tooth paste is booming along because of its appeal to the children's market. The paste itself is sugarless, contains "Three Neutralizing Ingredients" and is based upon a formula developed by Dr. Susslind, who also heads Koro Laboratories, Inc., makers of Koro "Bicarb-Action Tooth Powder."

The Tasty Tooth Paste apparently owes its popularity to a selection of two pastes, one which contains strawberry and the other bubble gum. This has certainly hit the kids right between the teeth because local reports say that there are many instances of an extravagant use of paste that would make tears come to the eyes of the conventional manufacturer.

It is far from news to the trade that flavor can be such a compelling influence in the sale of the established use of tooth paste. It remains to be seen whether a rather extravagant application of this sales factor will prove to be a fad or a business.

What's a Flavor?

The Federal Trade Commission is challenging the Angostura-Wuppermann Corporation on the definition of a flavor in the sale of their Drylem, a beverage flavoring powder.

The advertising for this product says that the flavor is that of fresh lemons and is derived solely from lemons. It is conceded that in manufacture of the product in addition to dehydrated lemon juice and dehydrated whole ground lemon also included are corn syrup solids, citric acid and calcium phosphate. The company's answer states that these ingredients "have no bearing or effect on flavor." This company states that "the flavor of the fresh fruit is captured and retained and no other flavoring agents, artificial or otherwise, are used."

Ribbons

The ribbon and gift wrapping industry has a total annual volume of about $15,000,000. These people contain some important suppliers for the perfume and cosmetic business.

Recent market research has emphasized to these manufacturers that unusual gift wrappings are vital to better display planning.

For instance, there are ribbons to conform with birthdays, weddings, anniversaries, etc. Now these manufacturers have decided that gift wrappings will follow fashion trends in color and style.

NEW PRODUCTS AND NEW PACKAGES

ABBOTT LABORATORIES have announced the availability of Sucaryl Sodium Sweetening Solution, a liquid form of Sucaryl Sodium. This noncaloric sweetening agent is designed for sweetening foods for the diabetic, and for reducing and other sugar-restricted diets. It can be used in cooking, baking and canning without loss of sweetness and does not leave a bitter metallic after-taste when used in ordinary quantities.

Abbott has also introduced Thenylene Hydrochloride Solution, for parenteral veterinary use. This solution is for the treatment of allergies in cases where the release of histamine or histamine-like substances is suspected, such as anaphylactic shock, equine and bovine laminitis and skin allergies.

THE ANAHIST COMPANY INC. has introduced Hist-O-Plus to the public in selected areas of the northeastern states. This compound combines aspirin, phenacetin, and caffeine with thonzylamine hydrochloride, the antihistamine used in Anahist. Sold over the counter, Hist-O-Plus comes in a yellow package with a brown "plus" sign. There are two sizes, 98 cents and 55 cents.

PARFUMS BLANCHARD has added Evening Star to its line of perfumes. The Bouquet Concentrate sells for $1.25, $2 and $3 and the perfume for $1.50 and $5.

CALUMET MANUFACTURING COMPANY has added several new containers to its extending line in eye make-up, including a plastic hinged mascara box and eye shadow plastic container in both clear and colored polystyrene. In addition they are introducing a line of plastic jars in seven sizes made of polystyrene, melamine urea, or polythene.

THE CELLUPLASTIC CORPORATION has added a new size, the 12 dram vial, to its regular line of Clearsite Plastic Capsule Vials. These vials are shatterproof, weight one-fourth the weight of glass, and are not affected by common acids, alkalis or alcohols.

DERMETICS, INC. has made a special gift package of its Christmas Red Lipstick. The gift package is called Merry Makeup Kit and includes the Dermetics Automatic Powder Puff in its own feather-weight golden compact.

DESITIN CHEMICAL COMPANY is marketing Desitin Hemorrhoidal Suppositories with Cod Liver Oil which is said to have the advantage of greater healing properties owing to the high-grade, crude Norwegian Cod liver oil. The suppositories are soothing; they protect, lubricate and help relieve pain and itching; and they alleviate congestion, minimize bleeding, and guard against further trauma.

LADY ESTHER LTD. is promoting Hands-Up, a new complexion cosmetic for the hands. The demonstration package is a deluxe 3-ounce collapsible tube supplied by the Sheffield Tube Corporation.

DOROTHY GRAY, LTD. announces two new treatment preparations, Dorothy Gray Liquid Cleansing Cream and Dorothy Gray Dual-Purpose Emollient. The cleansing cream is a quick efficient cleanser which should be applied to the face and throat with a pad of cotton and removed with tissues. It leaves the skin clean, ready for applying makeup. The Dual-Purpose Emollient is a lotion for use and an overnight lubricant for dry and normal skins, and also makes an excellent daytime powder base.

HOUBIGANT, INC. is introducing a new Violette Eau de Toilette in a handsome bottle and cream colored box which sells for $1.50.

RICHARD HUDNUT has announced a new hair product, Formula A-10 For Men. Among other claims, this product is said to check excessive falling hair, cleanse the scalp of loose dandruff scales; combat scalp fungus and bacteria; bring fresh nourishing blood to the hair roots; and relieve a dry scalp.

JOHNSON & JOHNSON has announced the addition of a new Extra-Fast-Setting bandage to their line of "Specialist" plaster-of-Paris bandages and splints. This product sets in 2 to 4 minutes and is put up in three sizes of two, three, or four inches wide by three yards long.

LEDERLE LABORATORIES have prepared three new Aureomycin products, designed specifically for dental use. Each of them, Aureomycin Crystalline Dental Cones, Dental Paste, and Soluble Tablets, may be used by dentists as an adjunct for the prevention or treatment of bacterial infections commonly encountered in dental surgery.

THE MAYBELLINE CO. has introduced a new 25-cent size of eye shadow in eight shades. Of clear plastic, the sliding-tray case permits the color of the shadow to show clearly, making selection easy and definite. The various shades are blue, blue-gray, pearl gray, turquoise, violet, green, brown, and crystal.

WHO'S WHO IN PLAXPAK BOTTLES

RARELY has a package combined practical convenience and styling in so high a degree as the Plaxpak bottle. The values of the bottle have been weighed, field-tested and highly approved. The public — impressed with its convenience — has acclaimed it and now looks for it.

ALEXANDRA de MARKOFF
ANAHIST • BRECK
DERMETICS, INC. • DEW
ALFRED DUNHILL
DOROTHY GRAY • HERB FARMS
HINDS HONEY & ALMOND CREAM
RICHARD HUDNUT • L'ORLE
R. H. MACY & COMPANY, INC.
MAX FACTOR HOLLYWOOD
ODO-RO-NO • S.S. PIERCE
REVLON • SHULTON • SKOL
SPORTSMAN • SPRITE
STOPETTE • TUSSY

unbreakable... can be squeezed, squashed, but not smashed.

controlled dispensing... spray, drop, or stream.

lightness... 1/5 the weight of glass empty; 1/2 filled.

new styling... package designers have new medium.

safety... everywhere with everyone across the room or continent.

Full assistance is available from Plax to help you apply the Plaxpak bottle to your product.

Other leading Plax products are annealed (for easier machining) methacrylate rod and Polyflex* polystyrene sheet — the strong, low cost transparent material that adds visually to product sales appeal.

Plax blow-molded products are made under the following U.S. patents: 2128239, 2175053, 2175054, 2230188, 2230190, 2260750, 2263751, 2349176, 2349177, 2349178.

*T.M. Reg. U.S. Pat. Off.

PLAX
FOR PLASTICS
NOT SUBSTITUTES···IMPROVEMENTS

PLAX CORPORATION P.O. BOX 1019 HARTFORD 1, CONN.

In Canada, Plax Canada, Ltd., Toronto

OFFICES IN NEW YORK CITY, SYRACUSE, PHILADELPHIA, CINCINNATI and CHICAGO

Kimble Opticlear Vials come in eight popular sizes

How to give your product added prestige

Kimble Opticlear Vials with their sparkling clearness, their uniform walls and graceful contours reveal and emphasize the high quality of the products they protect.

Then too, there are the attractive, new plastic stoppers which seal your product safe from moisture and contamination. Even after these have been removed and replaced repeatedly, reseal is quick and positive. Examine some Kimble Opticlear Vials. Tell us sizes and we will send samples.

Specify Kimble for assurance of container quality

KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company

NEW PRODUCTS AND NEW PACKAGES

NORWICH PHARMACAL COMPANY has introduced Ridall, an effective external preparation for treating crab, head, and body lice, and nits.

PARKE, DAVIS & COMPANY have introduced two new products: Dihydrostreptomycin Solution for parenteral use, valuable in treatment of certain types of tuberculosis and other infections and Penicillin S-R with Dihydrostreptomycin, for the treatment of infections due to gram-positive and gram-negative organisms. Parke, Davis have also announced that they are supplying chloromycetin in Kapseals containing 250 mg. and in packages containing 16 Kapseals as well as in bottles of 100.

Another Parke, Davis addition is Kapseals Geriplex, a multiple vitamin combination specifically designed to be used as a vitamin supplement in the treatment of patients with ,geriatric ailments.

JEAN PATOU has introduced "Savon Joy," the luxury soap complement to "Joy" perfume and "Poudre Joy." A pure, French-milled complexion soap, it is deeply scented with the same fragrance as its perfume counterpart.

CHAS. PFIZER & CO., INC. has now made terramycin available in troche form for use against oral, dental, and throat infections. The "Terramycin Troches" are mint flavored and packaged in individual foil-wrapped strips of 24, with each troche containing the equivalent of 15 mg. of crystalline terramycin base. They may be dispensed only on the prescription of physicians or dentists.

SCHIEFFELIN & CO. has announced the availability of Solu-Plastin, a new stable thromboplastin solution, which eliminates the need for the time consuming manipulations previously necessary to prepare thromboplastin powders for use.

SMITH, KLINE & FRENCH LABORATORIES is presenting Drilitol, a stable, isotonic aqueous solution, used in the prophylaxis and treatment of a wide range of common upper respiratory tract disorders, including the common cold, sinusitis, nasopharyngitis, allergic rhinitis, and other similar ailments. Drilitol contains two antibiotics, anti-gram negative polymixin and anti-gram positive gramicidin, both being highly bactericidal. It also contains an efficient antihistaminic, thenylpyramine, and an effective vasoconstrictor, Paredrine Hydrobromide.

STERLING-WINTHROP RESEARCH INSTITUTE has been working on a new pain killer for severe menstrual conditions and headaches. In pharmacological experiments with the new compound, known chemically as N-(2-(2-pyridyl)-ethyl-phthalimide, Dr. John R. Lewis, research associate, found it to be three times more effective than aminopyrine. It does not lower fever, as aspirin does, and it is twice as active in decreasing the stimulation induced by such drugs as desoxyephedrine.

MARVIN R. THOMPSON, INC. is ready to distribute Ampul Quinidine Sulfate containing 3 grains of quinidine sulfate, per cc., in sterile, stable solution of propylene glycol. It is used for the control of auricular fibrillation and paroxysmal tachycardia when preparing those patients for surgery who have previously shown cardiac damage. Chief advantages in the product are that a small dose is all that is needed when multiple intramuscular injections are called for. The size of the dose permits a more careful, clinically controlled evaluation and greater margin of safety.

TUSSY COSMETIQUES will offer Medicated Lotion for disturbed and problem skins in January. The lotion represents a special formulation which soothes, and helps dry and heal unsightly blemishes and pimples and is particularly effective for adolescent skins.

WHITE LABORATORIES, INC. is distributing Dram-cillin with Triple Sulfonamides, which provides additive, antibiotic-chemotherapy against organisms susceptible to penicillin-sulfonamide mixtures. It is administered by mouth, since oral penicillin appears to produce fewer reactions of hypersensitivity. Combined sulfonamides have been found to reduce the incidence of crystalluria and lessen the danger of kidney blockage.

WINTHROP-STEARNS INC. is introducing a new 5-ounce polyethylene squeeze bottle dispenser with double closure for pHisoderm with Hexachlorophene 3 per cent. A fluid antibacterial detergent sudsing cream effective in any kind of water, this product may be used by simple pressure of the sides of the new container.

Winthrop-Stearns is also offering Pentobrocanal, a more stable pentobarbital, to veterinarians. It is said to be less depressing on the circulation and respiration of the animal.

We are now in a position to supply
bottles and jars with fired-on ceramic
labels and decorations.
cream shampoo
Perfume
CARR-LOWREY
GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

4 good reasons for choosing CROWN CLOSURES

1 CROWN CLOSURES SEAL BETTER

Only Crown Screw Caps have the patented Deep Hook Thread. The under-reaching grip of this thread exerts an almost vertical down-pull, providing greater sealing pressure without binding or wedging.

Crown Lug Caps, because of their flexible structure, have an even, uniformly distributed down-pull. They seal securely and are easily removed with a simple quarter-turn action.

2 CROWN LINERS ARE DEPENDABLE

In Crown Closures, great emphasis is placed on the quality and suitability of the liner for the product. Crown's years of accumulated sealing knowledge is at the disposal of customers.

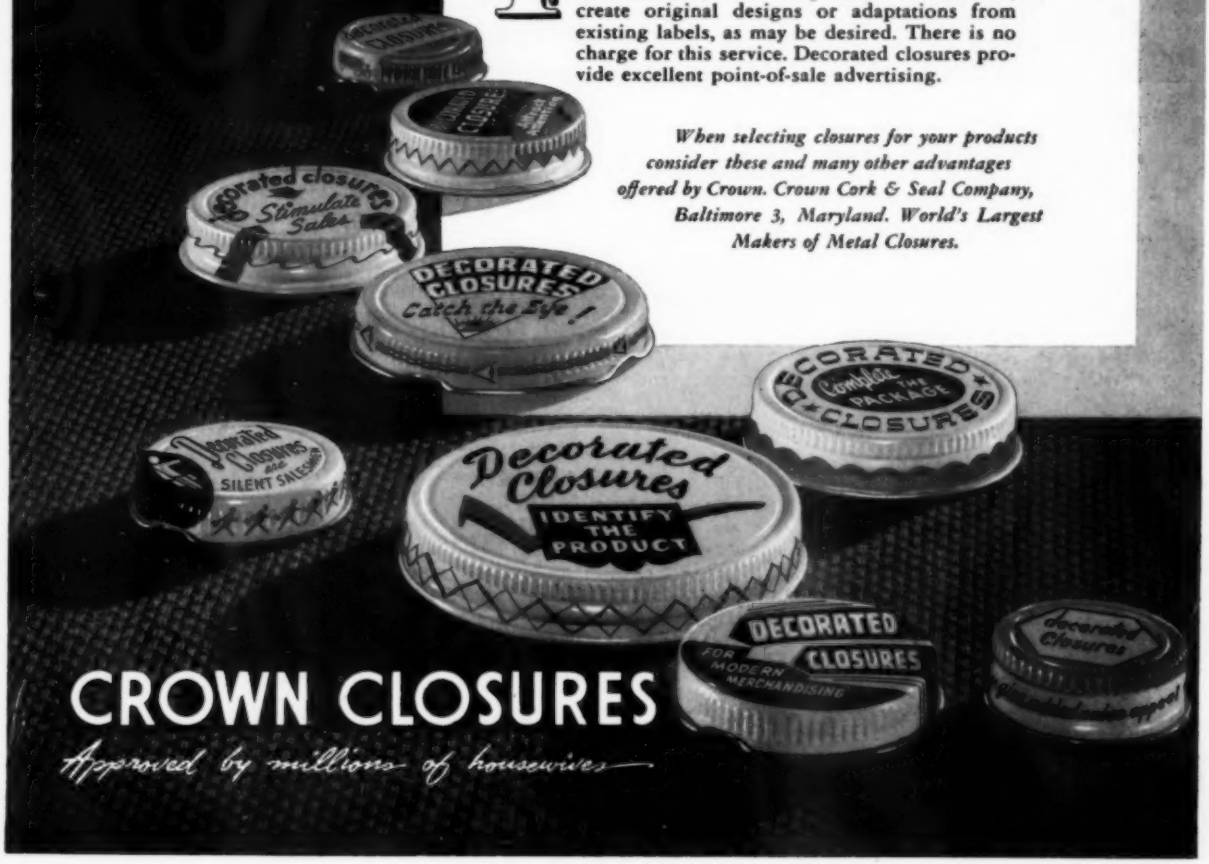
3 EXTENSIVE LABORATORY SERVICE

Crown maintains two separate laboratories. One for the research and development of improved sealing materials. The other serves exclusively as a customer's consulting service available without cost to assist them in solving processing and sealing problems.

4 SKILLED DESIGN SERVICE

Crown provides a comprehensive Design Service to develop designs for decorated closures. Crown artists, who are specialists in this field, create original designs or adaptations from existing labels, as may be desired. There is no charge for this service. Decorated closures provide excellent point-of-sale advertising.

When selecting closures for your products consider these and many other advantages offered by Crown. Crown Cork & Seal Company, Baltimore 3, Maryland. World's Largest Makers of Metal Closures.

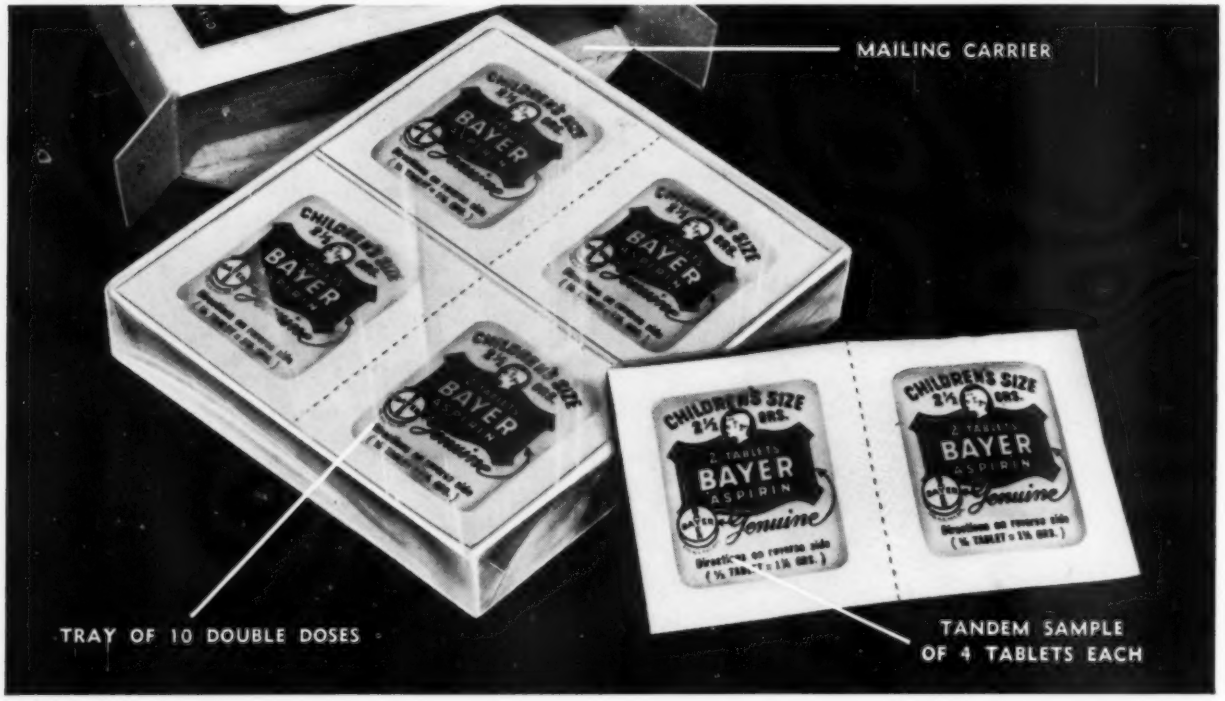

Decorated Closures Stimulate Sales
DECORATED CLOSURES Catch the Eye!
DECORATED CLOSURES Complete the PACKAGE
Decorated Closures are SILENT SALESMEN
Decorated Closures IDENTIFY THE PRODUCT
DECORATED CLOSURES FOR MODERN MERCHANDISING
Decorated Closures

CROWN CLOSURES

Approved by millions of housewives

UNIT PACKAGING HEADQUARTERS PRESENTS

"Package of the Month"



. . . the New I·L Multi-Unit Professional Sample

In the important field of sampling, the package must not only be attractive and protective, and economical—it must be functionally designed for the particular purpose. That unit packaging satisfies every demand, and offers unlimited possibilities, is indicated by the new non-prescription package shown above—one of thousands of Ivers-Lee creations.

For this non-prescription product which is being ethically advertised to the medical, surgical and dental professions, a sample package was required which would be (a) Convenient for the doctor to distribute (b) Dependably protective over long periods (c) Carry a generous supply (d) Economical to produce and handle (e) Directly related in appearance to the sales container.

We created the miniature package shown above (which assures customer recognition by having a facsimile of sale container, front and back) and handle every detail, turning it over to the customer ready for mailing. On our high-speed, automatic machines we produce the double miniature packages of 2 tablets each, made of a special thermoplastic material designed for this special purpose. Skilled operators working along conveyor belt assemble twenty samples of 2 tablets in each tray. The tray is then wrapped in cellophane on automatic wrappers, and packaged for shipment. The customer simply delivers to us his product in bulk, together with the necessary inserts and mailers—we do the rest—another example of

The Finest Packaging In The World At Less Cost

IVERS-LEE COMPANY
NEWARK, NEW JERSEY

SANITAPE — THE SEAL OF PACKAGING PERFECTION — SEALTITE

#1

Non-rolling, extra-depth, Bakelite cap; thick-flange rubber bulb; Saftee-ball glass.

#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4

Metal cap; AMEKINE oil-resisting rubber bulb; blunt glass.

Improved bottle shape. Designed to lie flat for convenient labeling. Front provides ample label space.

New Perfection

DROPPING PARTS

Protect YOUR PRODUCT'S REPUTATION

Your product's hard-won reputation is risked every time it is taken from the medicine chest. Any inconvenience, such as a non-functioning dropper, will be permanently associated with it. You can remove this risk by entrusting your carefully-compounded preparation to New Perfection dropping parts—painstakingly made of quality materials for the utmost in dependability and cleanliness.

✱ ***We can supply dropping parts to fit your bottles or furnish complete with our own bottles.***

RUBBER BULBS

are supplied in many styles and colors. Oil-resisting AMEKINE synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS

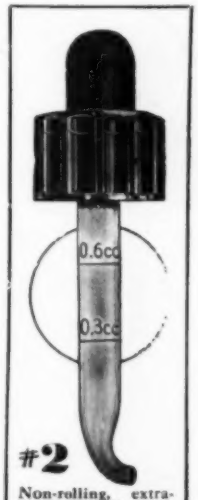
of plastic or metal, can be furnished in a complete range of sizes and colors.

DROPPER GLASSES

are available in a wide variety of styles and sizes. Plain or CALIBRATED in any color to mark specific dosages.

BOTTLES

in an attractive modernistic style in Amber, Blue, Green or Clear glass, are available complete with dropping parts, in the following sizes: 2cc, ⅛, ¼, ½, 1 and 2 oz.



#2

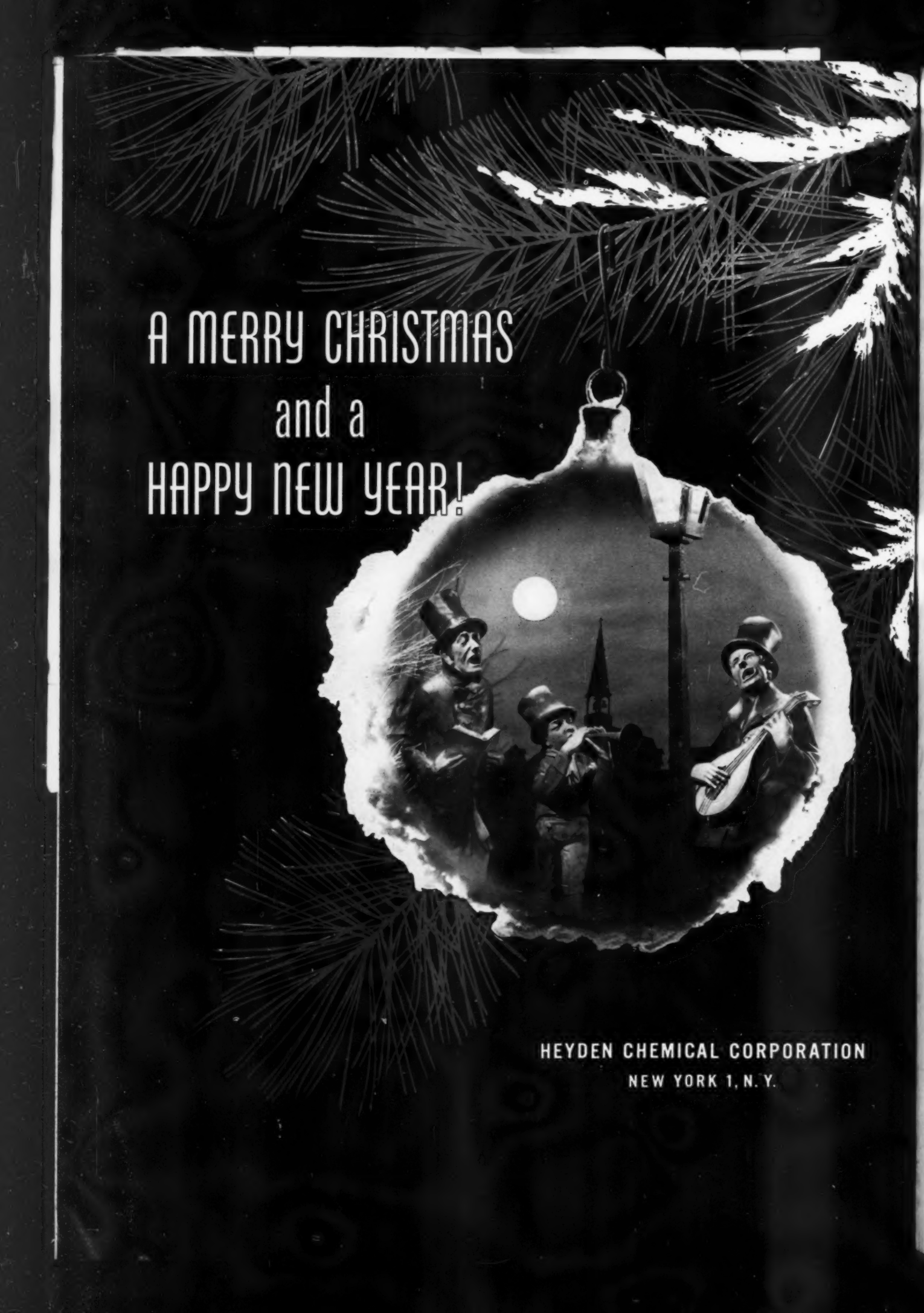
Non-rolling, extra-depth Bakelite cap; thick flange rubber bulb; CALIBRATED special bent glass.

Write for Samples and Quotations

PENNSYLVANIA
GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.


A MERRY CHRISTMAS
and a
HAPPY NEW YEAR!
HEYDEN CHEMICAL CORPORATION
NEW YORK 1, N. Y.

NEWS...

McDonough Heads Cosmetic Chemists

Dr. Everett G. McDonough, vice-president of Evans Research & Development Corporation, was elected president of the Society of Cosmetic Chemists at its annual meeting held December 5, at the Biltmore Hotel, New York. Saul D. Hershon, research director, Pepsodent Division, Lever Brothers, was elected vice-president; Moody L. Crowder, of the Pond's Extract Co., was elected treasurer; and Robert G. Kramer, of Evans Chemetics, Inc., was elected secretary. Paul G. I. Lauffer, of the George W. Luft Company, was reelected a director, and the retiring treasurer Emery A. Emerson, was also elected a director.

DR. E. G. McDONOUGH

Givaudan Holds Annual Party

Givaudan-Delawanna, Inc. presented its annual Fall reception and cocktail party on November 16 at the University Club in New York, on behalf of Andre Givaudan who was visiting America. Several hundred executives of the cosmetic perfume, and allied industries attended the celebration. The day after the party Mr. Givaudan departed for Switzerland, terminating a three-week visit to this country and Mexico.

A feature of the party was a diagramatic demonstration of the growth, number of buildings, floor space, and production capacity of the Givaudan factory at Delawanna, N. J.

Named V.P. of Union Pharm.

Walter B. Smith has been appointed vice-president and general manager of the Union Pharmacal Company and Artra Cosmetics, Inc.

Appointed by Hubigant Sales

H. T. Georgi, former manager of the wholesale division of Hubigant Sales Corp., has been appointed promotion manager for the corporation.

Sauers Promoted by Pepsodent Div.

Leslie A. Sauers, field sales manager, has been appointed national chain drug sales manager of the Pepsodent division of Lever Brothers Company. He joined Lever in 1928 as a salesman, became field supervisor in 1940, divisional manager for the St. Louis division in 1945, and national field sales manager in 1946.

LESLIE A. SAUERS

Foragers to Honor Arcularius

R. S. Arcularius, representative of Alexandra de Markoff, will be the guest of honor at the annual banquet of the Foragers of America at the Hotel Astor on Saturday evening, January 6. Last month the Foragers had a very successful Thanksgiving party at their club rooms in the Statler Hotel.

Lo Bue Resigns from Mich. Chem.

Philip J. Lo Bue has severed his connection with the Michigan Chemical Corporation, in order to devote his full time to expansion and development plans of the Philip J. Lo Bue Company which recently moved to new quarters at 277 Park Avenue. At the same time Foster T. Smith, formerly of Merck & Co., Inc., has been named sales manager for the company.

Heyden Brochure on Antibiotics

The Heyden Chemical Corporation has just issued a new 3-color illustrated brochure on penicillin and streptomycin, which are manufactured at the company's Princeton, N. J., plant. Copies of the booklet are available upon request to the company's main offices at 393 Seventh Ave., New York, 1.

Dr. Kunz Receives Award

Dr. Eric C. Kunz received the 1950 Society Medal Award at the Society of Cosmetic Chemists Dinner on December 5 for his contributions to the art and science of cosmetics. During the presentation, Valentine H. Fischer, Dodge & Olcott, delivered an address on "Eric C. Kunz, An Appreciation," and Edward Sagarin, Givaudan-Delawanna, Inc., spoke on "Eric C. Kunz, Medalist." Everett G. McDonough, out-going vice-president of the Society, presented the medal to Dr. Kunz.

DR. ERIC C. KUNZ

Robins Holds Training School

The A. H. Robins Company, Inc. held the largest training school of its history during the middle of October when thirty-three recently appointed medical representatives assembled in the firm's new offices for intensive drill in the promotion of products and in institutional policies. J. Carrerras of Mexico, Luis Garraton and Nabor Mendez of Puerto Rico, and Clarance Boyd of Panama, representatives from Latin America who are assigned to the firm's Export department, were included in the trainee group.

The ten-day conference, beginning with a welcoming address by President E. Clairborne Robins, was under the direction of E. F. Heffner, Jr., sales manager. Other speakers, who dealt with the problems of their respective departments, were G. Mallory Freeman, advertising manager; Dr. Martin Reyes, export manager; and Donald Eason, head of the accounting department.

Triples Chlorophyll Plant Capacity

American Chlorophyll, Inc. has tripled its plant capacity within the past three months in order to take care of the increased demand for chlorophyll, according to Charles Bowman, sole distributor.

ASCORBIC ACID, U.S.P.

'Roche', the world's largest producer of vitamin C has four types to meet your special needs: **Granular, Fine Granular, Fine Powder, and Ampul.** Your ascorbic acid orders will receive expert attention and prompt shipment. Phone or wire today.

'ROCHE'

FAST SHIPMENT

CALL 'ROCHE' FOR VITAMINS

VITAMIN DIVISION
HOFFMANN-LA ROCHE INC.

NUTLEY 2-5000
NUTLEY 10, NEW JERSEY

Pacific Coast: L. H. BUTCHER Company • San Francisco, Los Angeles
In Canada: Hoffmann-La Roche, Ltd., Montreal, Que.

Nat'l Drug Trade Conference

National legislation having to do with this industry was discussed at some length at the National Drug Trade Conference held in Washington, December 1. In commenting on the Durham-Humphrey Bill having to do primarily with the refilling of prescriptions James F. Hoge, counsel for the Proprietary Association, said that this bill was by far the most important bill to appear since the original Tugwell Bill. He said that the ramifications of application of the bill to the drug industry over the next ten years could not be forecast by anyone. He said that the bill would absolutely take away from manufacturer the right to channel his products through professional channels, a right which he might possibly not possess at the present time of the Food, Drug, and Cosmetic Act. The bill gives the Food and Drug Administration the right to stop self-medication absolutely, and since the FDA is part of the Federal Security Administration whose Administrator Oscar R. Ewing, the strongest advocate of socialized medicine, the bill might be in favor with officials of the FDA for this reason. Everyone seems in accord with its provisions regarding telephone prescriptions and other provisions which would clarify the prescription situation.

In answer to a question as to whether or not the present Food, Drug, and Cosmetic Act contains authority to prohibit the refilling of prescriptions, the concensus of those present acquainted with the law and its provisions was that the bill gives no such authority. The suggestion was made by L. D. Harrop, counsel for the American Drug Manufacturers Association, that the various member organizations of the Conference arrive at an agreement on the subject and then take the matter up with the American Medical Association so as to bring their plan into conformity with the wishes of the physicians who write the prescriptions. From there the matter would be taken up with the Food and Drug Administration in an attempt to get a definite and reasonable presentation of views and application of controls.

With regard to the proposed bill for general certification of antibiotics, a question was asked why the drug manufacturers were cooperating in an attempt to have a general certification bill enacted when they were quite thoroughly dissatisfied with the limited certification provisions now in effect. The answer was given that antibiotics certification was now in the law through amendments and the only way to get these provisions changed so as to place at least a time limit on the exercise of such authority by the FDA, was through a new bill which cover all certification adequately.

It was brought out in the discussion that the FDA is loath to surrender its certification powers for the reason that it is collecting about $3,000,000 a year in certification fees, this money not going into the general fund but being retained by FDA for its own use. Also it was brought out that the FDA has extended the sterility period in the testing of antibiotics on the basis of having found mold and yeast through the procedure of using larger samples of the antibiotics to be examined. This action will have a serious effect on the flow of antibiotics to meet current demand, it was said.

Robert P. Fischelis reported that there had been relatively little action during the past year with regard to uniform state legislation.

Numerous resolutions which, for the most part, reaffirmed action taken at previous meetings, were adopted by the Conference. A memorial resolution was adopted for the late Dr. E. L. Newcomb.

Carson P. Frailey, Executive Vice-president of the A. D. M. A., was reelected president of the Conference. Dr. Frederick J. Cullen, Executive Vice-president of the Proprietary Association, was reelected vice-president; and Ray Schlotterer, Executive Vice-president of the Federal Wholesale Druggists Association, was reelected secretary.

Remington Medal Presented Posthumously

The New York Branch of the American Pharmaceutical Association held a meeting in memory of Dr. Edwin L. Newcomb on December 4 in the Harkness Theatre of Butler Library, Columbia University, New York. Dr Curt P. Wimmer, Emeritus Professor of Pharmacy, Columbia University, College of Pharmacy, and editor of the New York State Pharmacist, made a posthumous presentation of the 1950 Remington Honor Medal which had been awarded to the late Dr. Newcomb earlier this year for his outstanding achievements in Pharmacy.

Speakers at the meeting were Dr. John W. Dargavel, executive secretary, National Association of Retail Druggists; Dr. Ivor Griffith, president, Philadelphia College of Pharmacy and Science; Dr. Theodore G. Klumpp, president, Winthrop-Stearns, Inc.; Dr. Ernest Little, Remington Medalist 1949, Professor of Chemistry, Rutgers University, College of Pharmacy; and Dr. Wimmer.

Cutter to Build Solutions Plant

Cutter Laboratories have chosen Chattanooga, Tennessee, as the location for their new hospital solutions plant. The plant, which will employ an estimated 75 people, will service the southern and eastern market, according to T. R. Sandberg, Cutter Works manager. Construction of the building will begin immediately and will be located in the former Mars Field Section of East Chattanooga.

G. F. Roll, public relations manager of Smith, Kline & French Laboratories (center) receiving the American Public Relations Association's Silver Anvil Award from Edward P. Lyman, APRA president. At left is Joseph N. DuBarry, assistant to the executive vice-president of SKF. Award was given to SKF for its development of color television as a medical teaching aid.

Methocel:

the Indispensable Film Former

Do you need a *better* film former? Try the *new* Methocel *powdered*. Here is a film forming synthetic gum that gives you proved advantages in many drug and cosmetic applications.

In hand lotions and make-up preparations, Methocel gives a superior film—a film that is pure and uniform. Methocel is particularly suited as a film forming vehicle with drugs for topical applications.

Methocel (Dow Methylcellulose) is soluble in water—completely neutral—odorless, tasteless, colorless. And in addition to its excellent film forming qualities, Methocel serves as the ideal binder, emulsion stabilizer and thickener.

Try the new METHOCEL, *powdered*. Send for a free experimental sample and literature on drug and cosmetic applications.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

THE new *methocel*

DID YOU GET YOUR SAMPLE?

The Dow Chemical Company
Dept. ME-545B
Midland, Michigan

Please send free sample of METHOCEL, for use in_____

Check viscosity desired: 15, 25, 100, 400, 1500, 4000 cps.

Name and Title_____

Firm_____

Address_____

DOW

CHEMICALS

INDISPENSABLE TO INDUSTRY AND AGRICULTURE

Schenley Enlarges Detail Staff

Schenley Laboratories, Inc. have added six new detail representatives to their national coverage. Michael E. Dudley has been as signed to Chicago; Peter Jugan, to Jersey City, N. J.; James J. Manos, to Seattle; George P. Pillischer, to Newark, N. J.; Edward T. McCrann, to Omaha; and Harold C. Cronk, Portland, Oregon.

Hoffmann-La Roche Appointments

Chester C. Robinson has been named sales manager of the Hoffmann-La Roche bulk vitamin division, according to Paul J. Cardinal, vice-president in charge of the division. J. C. Lamping, Jr. was simultaneously appointed to succeed Mr. Robinson as one of the company's two vitamin division representatives operating out of Chicago.

G. G. VanPatten continues as the Roche vitamin division representative covering Minnesota, Iowa, the Dakotas and parts of Chicago. Paul E. Sleezer has joined the company, and is associated with G. F. Siemers, technical director of the vitamin division at Nutley, N. J. He was until recently with Injectables Research Corporation.

CHESTER C. ROBINSON

Reheis Adds to Research Labs.

Reheis Company, Inc. recently enlarged its research laboratories, with an addition devoted to research in fine chemicals. The New laboratory, under the direction of P. M. Brown Jr., will be used primarily for the development and utilization of alumina gels and new aluminum salts.

Appointed by Sharp & Dohme

John R. Stockton has been appointed assistant to the director of biological production at Sharp & Dohme, Inc., according to Dr. J. E. Schneider, director of biological and sterile pharmaceutical production.

Standing in front of Abbott's new fire-fighting truck are, left to right, Fire Chief George Ryckman of Waukeegan; Floyd K. Thayer, director of Chemical sales; George R. Cain, executive vice-president; Dr. E. H. Volwiler, president and general manager; Ferdinand H. Young, vice-president and director of production; James F. Stiles, Jr., vice-president and treasurer; and Fire Chief Howard Redding of North Chicago.

Dart Appointed by Abbott Labs.

Ralph C. Dart has been appointed assistant manager of the distribution department of the sales division of Abbott Laboratories, according to H. S. Wilkinson, director of sales. He has recently been assistant editor of the Abbott sales bulletin and manager of the insurance program of the sales department and will continue this work in his new position.

RALPH C. DART

Merck 25-Yr. Club Meets

One hundred thirty-six members of the Merck Quarter Century Club, New York and Rahway Chapter, attended the organization's twelfth annual dinner meeting at the Elizabeth Carteret Hotel, Elizabeth, N. J., last month. Principal speakers at the meeting were the club's honorary president, George W. Merck, chairman of the board of Merck & Co., Inc. and James J. Kerrigan, president.

Lydia Rebenklau was elected president, succeeding John H. Maget; Walter R. Hosch was named vice-president; and Walter L. Wilson, Sr., secretary-treasurer.

Seven Men Join SKF Staff

Smith, Kline & French Laboratories have added seven members to their staff. Dr. John K. Clark, instructor in clinical pharmacology and associate in medicine, will be associated with the research sub-division and Dr. Ernest M. Brown Jr., assistant instructor in medicine, will serve as development project director as well as a member of the medical department.

Francis C. Grant Jr., former third secretary and vice consul at the American Embassy in Paris, has been made head of the foreign products acquisition section of SKF.

Two new scientists have been added to the research laboratories. Dr. Howard L. Dinsmore, former research chemist at the Naval Research Laboratory and later research associate in Chemistry at Brown University, has joined the physical chemistry section. Robert E. Keller, who recently completed his doctorate at State University of Iowa, has joined the research analytical section as a senior analytical chemist.

Dr. Carl H. Cunov has joined the manufacturing division of SKF as assistant to the plant technical director. Robert L. Dean, formerly of the Resinous Products division of Rohm & Haas Co., has joined the editing unit of SKF's medical department.

Appointed By Matchabelli

Vera Lilly has become southwestern sales representative for Prince Matchabelli, Inc., succeeding Mrs. Beatrice Amos Graves who resigned to establish a gift shop in Brazoria, Texas. Prior to her association with Prince Matchabelli Miss Lilly had covered the same territory for five years for Lentheric.

Visit Burroughs Wellcome

Burroughs Wellcome & Co. (U. S. A.) Inc. were hosts to a United Kingdom Productivity Team of ten pharmaceutical manufacturing men last month. The team, composed of labor, management and technical personnel, visited 18 pharmaceutical manufacturing plants throughout the United States under the auspices of the Anglo-American Council on Productivity and the Economic Cooperation Administration.

The team's work is divided into three parts: a tour of their British pharmaceutical manufacturing plants, a tour and study of the American pharmaceutical manufacturing plants, and implementation of their findings through publication of a report and meetings in order to disseminate the information throughout the British pharmaceutical industry.

Pharmaceutical manufacturing men from the United Kingdom who visited Burroughs Wellcome, and company officials are, left to right: J. Bach, project manager, ECA; L. Murphy, Wellcome Chemical Works, Dartford; G. Page, manager, Evans Pharm. Labs., Liverpool; M. Acton, works chemist, "B. W. & Co."; W. Woodard, head of Pharmacy Unit, Research and Development div., Glaxo Labs., Ltd., Middlesex; J. Cronin, president, Local No. 7, International Chem. Workers' Union, "B. W. & Co."; H. Smith, Draftsman, Imperial Chem. Industries, Ltd., Manchester; E. Abrahamsen, plant manager, "B. W. & Co."; W. Coughtrey, factory manager, Glaxo Labs., Ltd.; F. Coe, assistant to the president, "B. W. & Co."; H. Rolfe, pharmaceutical director, the British Drug Houses, Ltd., Liverpool; Dr. C. Ferry, chief control chemist, "B. W. & Co."; J. Brennan, in charge of Pharmaceutical processing, Imperial Chemical Industries, Ltd.; C. Pressel, production manager, "B. W. & Co."; W. Irving, fitter chargehand, Imperial Chem. Industries, Ltd., Manchester; J. Matthews, personnel manager, "B. W. & Co."; and W. Ledsham, checker, Evans Medical Supplies, Ltd., Liverpool.

European Group Visits Cyanamid

A group of research specialists from six European countries visited the Stamford Research Laboratories of American Cyanamid Company on November 10 as a part of a general American tour to observe research laboratory methods of operation. The group is in this country the auspices of the Economic Cooperation Administration. Accompanied by Maurice T. Barnes and B. J. Johnson from the Washington office of E.C.A., the visitors were welcomed at the laboratory by Dr. E. H. Northey, assistant to the director of research and development.

The visiting research specialists included Ir. Robert Charles Moreau, France and Dr. Guy Emschwiller, France; Ir. Domenico Maragliano and Ir. Alessandro Baroni, Italy; Ir. Arnoud Willy van Seters and Ir. Jan B. LePoole, the Netherlands; Ir Bjarne Andvord Tonnesen, Norway; Ir. Hans Lennart Simonsson, Sweden; Ir. Arne Fokdal, Denmark; and Jean Paul Couney, French Embassy.

Resigns To Form Eddy Glass Co.

Maxson A. Eddy, who recently resigned from the Wheaton Glass Co., Millville, N. J., where he was in charge of the tubing and ampul department, announces the formation of the Eddy Glass Company, package consultants to the drug and chemical industries. The offices of the company will be located at East Landis Ave., Vineland, N. J., and 2123 Delancy Pl., Philadelphia 3. Telephone numbers are respectively, Vineland 7-1854 and Rittenhouse 6-7893.

Fardin Awarded Trophy

Roger Fardin, in charge of maintenance at Ungerer & Company's plant, won the company's 1950 Golf Tournament which took place at the Essex Fells Country Club, Essex Fells, N. J. in October. William H. Dunney, Jr. of Ungerer's New York office, was runner up. Mr. Fardin was presented with the President's Trophy during a luncheon held at the club upon completion of the match. The trophy was donated by K. G. Voorhees, Ungerer president, and will remain in the possession of Mr. Fardin until October, 1951.

Gardner Celebrates 50th Year

The Gardner Board and Carton Company observed its 50th anniversary November 28 with a golden jubilee dinner at the Hotel Manchester, Middletown, Ohio. Wellmore B. Turner, Dayton attorney, and chairman of the board, delivered the principal address; Colin Gardner, a director of the company and executive vice-president in charge of sales, acted as toastmaster: and Edward T. Gardner, co-founder, a director and president of the company, reviewed historical incidents in the company's past.

A total of 650 reservations, including wives of company veterans, and retired employees, were on the seating list for the dinner.

Max Factor to Replace Burned Plant

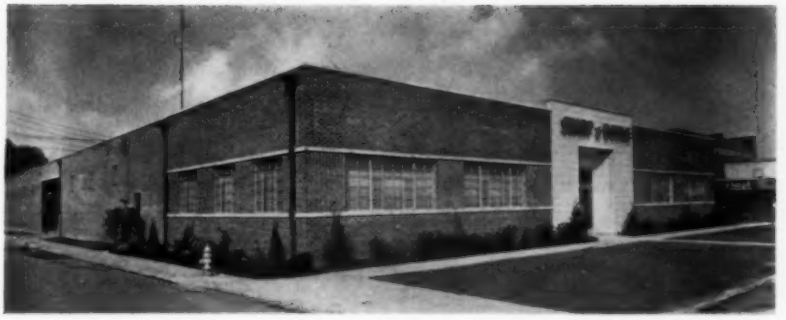
The Mexico City branch of Max Factor-Hollywood, which was destroyed by fire early last month, will be replaced by a larger and more modern plant, according to Max Factor Jr., president. Construction will start immediately. Sidney Factor and Leon Levi, executives of the company's export division, are now in Mexico City, in charge of the reconstruction program.

The fire, which originated in a lumber yard adjoining the Factor plant, destroyed all manufacturing equipment and damaged the firm's warehouse and business offices. The loss is estimated at $250,000.

Expands New Orleans Branch

The New Orleans branch office of Sharp & Dohme, Inc. recently moved to a new and larger building at 939 South Jefferson Davis Parkway, according to Elmer W. Metzger, director of Domestic Branches. The brick and concrete quarters cover 20,000 square feet of floor space and an additional 5,000 square feet of parking space for future expansion. An Illinois Central Railroad siding runs into the branch, permitting direct shipments from the company's Philadelphia plans and providing efficient service to Sharp & Dohme customers in Louisiana, southern Mississippi, most of Alabama and western Florida.

John P. Mauffray is New Orleans branch manager and Lynn C. Woods, the district sales manager.



Sharp & Dohme's new branch at New Orleans, which covers 20,000 square feet and is located on siding of Illinois Central Railroad.

Appointed by Sterling Drug

Carl J. Singler has been elected assistant treasurer of Sterling Drug Inc., according to James Hill, Jr., chairman of the board and president. He is manager of the company's tax department.

CARL J. SINGLER

1951 MM&R Sales Conference

Magnus, Mabee & Reynard, Inc. will hold the 1951 sales and staff conference at the Belmont Plaza Hotel, New York, from January 3 to 6, according to Arthur H. Downey, chairman of the conference committee, and the company's director of research and technology.

Expected to be the largest conference in the firm's history, it will be attended by more than 125 sales representatives, technical experts and executives from all parts of the United States and Latin America.

Roberson Sets Up Own Business

Victor Roberson, formerly a partner in Clifford L. Iorns Company, has established the Victor Roberson Company, 119 East Soper St., St. Louis 11.

Colton Appointments

Leo P. Gajda has been appointed chief engineer and Cecil Edgar, chief draftsman, of the Arthur Colton Company, according to Howard N. Maynard, president.

LEO GAJDA

CECIL EDGAR

Dr. Paul Talks on Polio

Dr. W. D. Paul, University of Iowa Hospitals, eminent teacher and scientist, addressed the student body and faculty of the St. Louis College of Pharmacy and Allied Sciences on November 15. Dr. Paul has been actively engaged in a study of the epidemology and treatment of poliomyelitis and described some of the latest developments in this field.

Tintz Co. Seeks Injunction

Tintz Company, Chicago manufacturer of Tintz Creme Shampoo hair coloring, has filed a counterclaim against Bymart, Inc., manufacturer of Tintair home hair coloring. The case is now pending in the U. S. District Court in Chicago. Tintz is seeking an injunction restraining the use of the name Tintair by Bymart and an award of profits and damages for trade-mark infringement and unfair competition. The company claims that the name Tintair is not only confusingly similar to its own long-established trade-mark, but that it is also almost identical with the expression, "Tints hair," which Tintz Co. has used on its packages and in its advertising for many years.

The trade-mark, Tintz, the company points out, has been used on home hair coloring preparations since 1932 and has been registered in the U. S. Patent Office since 1933. It claims, furthermore, that the Tintair package has the same gold, red, black and white colors and has the trade-mark written in the same slanting script as the Tintz package.

Bymart's trade-mark, advertising and packaging according to the counterclaim, is confusing to the public and detrimental to the legitimate activities of Tintz Co.

Calco Increases PAS Output

A new unit for the production of p-aminosalicylic acid is being rushed to completion at the Calco Chemical division, in an attempt to meet a deadline calling for full operation by the latter part of this month.

The demand for PAS has reached such proportions, because of its value as an adjunctive treatment with streptomycin for tuberculosis, that American Cyanamid Company has made additional substantial appropriations for new capacity.

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Lanolin Absorption Bases

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Tegin P . . . Propylene Glycol Monostearate—Self Emulsifying. For greaseless creams, lotions, ointments, brushless shave creams, cosmetic stockings, suntan creams and lotions.

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Named Sales Mgr. of Phillips Div.

Hubbard D. Nitchie, Jr. has been appointed sales manager of the Chas. H. Phillips Co. division of Sterling Drug Inc., according to O. W. Ergenzinger, vice-president in charge. Ernest V. Corbishley has been promoted to Mr. Nitchie's former post as sales supervisor of the eastern division.

HUBBARD D. NITCHIE

Stanton Office Moves to Chicago

Stanton Chemicals Company, formerly of Philadelphia, has opened a warehouse, laboratory and office at 14 North Michigan Ave., Chicago 2. They manufacture neutralizers and oil emulsions for the cold permanent wave industry.

Stanton has been appointed national sales representative for Halby Chemical Company of Wilmington for the sale of ammonium thioglycolate.

Watson Named by Amer. Cyanamid

Dr. Glenn S. Watson of Williamstown, West Virginia, has been appointed resident technical director for the Marietta and Willow Island Plants of the American Cyanamid Company, Calco Chemical division. Prior to that assignment he had been chief chemist of the Marietta Works since 1947.

Innis, Speiden Technical Staff

In connection with its new expansion program, Innis, Speiden & Co. has organized a technical service staff for the benefit of customers, according to W. H. Sheffield, Jr., president.

The following men are on the new technical staff, which reports to D. S. Cushman, vice-president in charge of sales: J. A. Schade, who will handle absorption bases for the cosmetic industry, as well as gums and waxes for all types of users; John Snoop, who will service gum and wax users in textile, polish, paper and related industries; J. P. Kesling, and R. P. Porter.

Muller with Cutter Labs.

Bill Muller, formerly in the product development department of Smith, Kline & French Laboratories, Inc., recently joined the executive sales staff of Cutter Laboratories. He will specialize in sales promotion and new product development.

BILL MULLER

Dr. Denton Talks on "Artane"

Dr. John J. Denton, discoverer of Artane which is used in treating Parkinson's disease, was the guest speaker at the November 15 meeting of the Raritan Valley Group of the North Jersey Subsection of the American Chemical Society. The meeting took place at the Calco Chemical division of American Cyanamid Company.

Dr. Denton, section director in pharmaceutical research at Calco, discussed the chemical research program which led to the discovery of the drug.

Doushkess with Strong Cobb & Co.

William N. Doushkess has joined Strong Cobb & Co., Inc. as director of the Chemical development division, according to George Miller, president. He had formerly been associated with a number of firms, incuding the National Aniline Company, J. T. Baker Chemical Company, S. B. Penick Company, and most recently, his own concern, the Netcong Chemical Company.

WILLIAM N. DOUSHKESS

Revlon Expands to England

The Revlon Products Corp. opened its own factory in Great Britain on November 30, and is completing plans for establishing branches in Euorope, beginning with Paris. Officials of the company are certain the operations will show a profit within a year, with additional returns from exports from Britain to other sterling countries.

Members of Innis, Speiden's new Technical Service Staff. Left to right, are John Snoop, J. P. Kesling, R. P. Porter, and J. A. Schade.

Upjohn Enlarges Research Staff

Drs. G. F. Cartland, H. G. Kolloff and M. H. Kuizenga have all been appointed assistant directors of research of the Upjohn Company, according to Dr. R. S. Schreiber, director of the research division. In addition to these three appointments, the following men have been promoted to department head status: J. S. Evans, Ph. D., antibiotics, with D. R. Colingsworth, Ph. D., as assistant department head; W. J. Haines, Ph.D., endocrinology; M. J. VanderBrook, Ph.D., patents and records. W. F. Enz, Ph.D., heads another recently created department of pharmaceutical development which formerly was a part of chemistry and pharmacy research.

DR. G. F. CARTLAND

DR. H. G. KOLLOFF

Dickinson with Sterling-Winthrop

Dr. William B. Dickinson has joined the organic chemistry staff of the Sterling-Winthrop Research Institute. He is associated with the research group headed by Dr. Syndey Archer.

Gane & Ingram Price List

Gane & Ingram, Inc. recently issued a new price list, copies of which may be obtained by writing the company at 43 West 16th St., New York.

Elmer H. Bobst, left, Warner-Hudnut president and honorary chairman of the American Cancer Society, receiving check for $150,000 from Dan Parker, president of Damon Runyon Memorial Fund, for Damon Runyon Clinical Research Fellowships.

E. Allen Newcomb Elected to Post

E. Allen Newcomb, executive secretary of the National Wholesale Druggists' Association, was elected a member of the steering committee of the Bureau of Education on Fair Trade last month, according to Dr. John W. Dargavel, bureau chairman. Mr. Newcomb is filling the vacancy left by the death of his father, the late Dr. E. L. Newcomb, executive vice-president of the NWDA.

DR. M. H. KUIZENGA

Van Winkle Named by Ethicon

Dr. Walton Van Winkle, Jr. has been appointed director of research for Ethicon Suture Laboratories, Inc., according to Richard B. Sellars, president, and will take office on January first. Dr. Van Winkle, formerly a medical official with the U. S. Food and Drug Administration, and more recently, with the American Medical Association, is taking over the administrative duties of Dr. H. L. Davis who will devote his full time to special scientific work and assignments for Ethicon.

On Evans Research Staff

Samuel B. Williams has joined the Evans Research & Development Corporation staff as research chemist, while E. Mitchell Becker and Margaret K. Baxter have been appointed as research assistants.

Heads Department at Cutter Labs.

Dr. Victor P. Seeberg has been named head of the recently created pharmacy and pharmacology research department at Cutter Laboratories. He has been with the laboratories for the past seven years, in charge of the pharmacy section.

DR. VICTOR SEEBERG

Named to Lever Staff

E. Lee Talman was elected administrative vice-president and a director of Lever Brothers Company, according to Jervis J. Babb, president, following a meeting of the board of directors in November at the company's Baltimore plant. He will assume his new duties January first.

Ide Named Eversharp President

Knox Ide, former president of American Home Products Corporation, was elected president and a director of Eversharp, Inc., to succeed Daniel Van Dyk on December first. Mr. Van Dyk will continue his active association with Eversharp as a member of both the executive committee and the board of directors.

Named Rep. For Charles Ross & Son

Lester K. Ross, vice-president of Charles Ross & Son Company, manufacturers of mixing, grinding, kneading, and milling equipment for the drug

LESTER K. ROSS

and cosmetic industries has taken over the sales representation for the Great Lakes region. He will be available for consultation to any firm considering new machinery and will also supervise sales and service in the Great Lakes states, including the cities of Syracuse, Rochester, Buffalo, Niagara Falls, Toledo, Detroit, among others.

Taugh to Establish Canadian Market

E. A. Taugh, 114 Ava Rd., Toronto, Ont., Canadian pharmaceutical house, is interested in contacting American firms who wish to market their Pharmaceutical Products in Canada. They are prepared to manufacture on a royalty basis.

Named to A.Ph.A. Posts

John A. McCartney, manager of trade relations, Parke-Davis & Company, has been named vice-president—elect of the American Pharmaceutical Association, and Don E. Francke, chief Pharmacist, University of Michigan Hospital, Ann Arbor, Michigan, president-elect. They will assume their respective offices in the national organization at the conclusion of the American Pharmaceutical Association's convention to be held in Buffalo during August, 1951.

Olson Honored by Lueders

Ola Olson, of the traffic department, George Lueders & Co., was welcomed into the company's veterans' organization as the forty-sixth member. At a luncheon held in his honor at the Drug and Chemical Club, he received a gold pin and many gifts from the company and from fellow employees.

Hadley Resigns from Schiaparelli

Arthur G. Hadley has resigned as executive vice-president and general sales manager of Parfums Schiaparelli, Inc. He has been with the company for the past seven years, first as Pacific

LEO V. TALAMINI

Coast representative and later as executive vice-president.

Effective January first, Mr. Hadley will be succeeded by Leo V. Talamini, who formerly occupied executive positions with Prince Matchabelli, Inc., and the Elizabeth Arden Sales Corporation.

On Monsanto Exec. Committee

Dr. Carroll A. Hochwalt and Felix N. Williams have been appointed to the executive committee of Monsanto Chemical Co. by the board of directors. Both men are vice-presidents of the company and members of the board of directors. Dr. Hochwalt will be responsible for the research, development and patent activities of Monsanto while Mr. Williams' responsibility will include sales, advertising, foreign and specialty products.

Fontanes Nominated Chevalier

Sylvain Fontanes, managing director of Givaudan & Cie. of Paris, has been nominated Chevalier of the Order of the Legion d'Honneur, in recognition of half a century of achievement on behalf of French perfumery. He is honorary president of the National Syndicate of French Manufacturers of Synthetic Aromatic Chemicals.

Elected by Drug & Chem. Export Club

Edward J. Hoyt, credit manager, Internation division, Vick Chemical Company, was elected chairman of the Drug & Chemical Export Club of the Foreign Credit Interchange Bureau at the club's annual meeting in New York, November 17. Lloyd Sinnickson, export credit supervisor, American Cyanamid Company, was elected vice-chairman at the same session.

Following the business session and annual meeting, all members of the club joined in a reception and dinner honoring the new officers and the retiring chairman, Harold E. Mix, manager of credits, S. B. Penick & Co.

History of Chemistry

The Mallinckrodt Chemical Works has just completed a comprehensive chart entitled "An Outline of the History of Chemistry," which presents the history from its origins in China, India and Egypt and traces the evolution of science up through the year 1950. The chart is based on an earlier outline by Dr. Norris W. Rakestraw, editor of the Journal of Chemical Education, and brought up to date by Herbert S. Klickstein, editor of Chymia, international journal of chemical history.

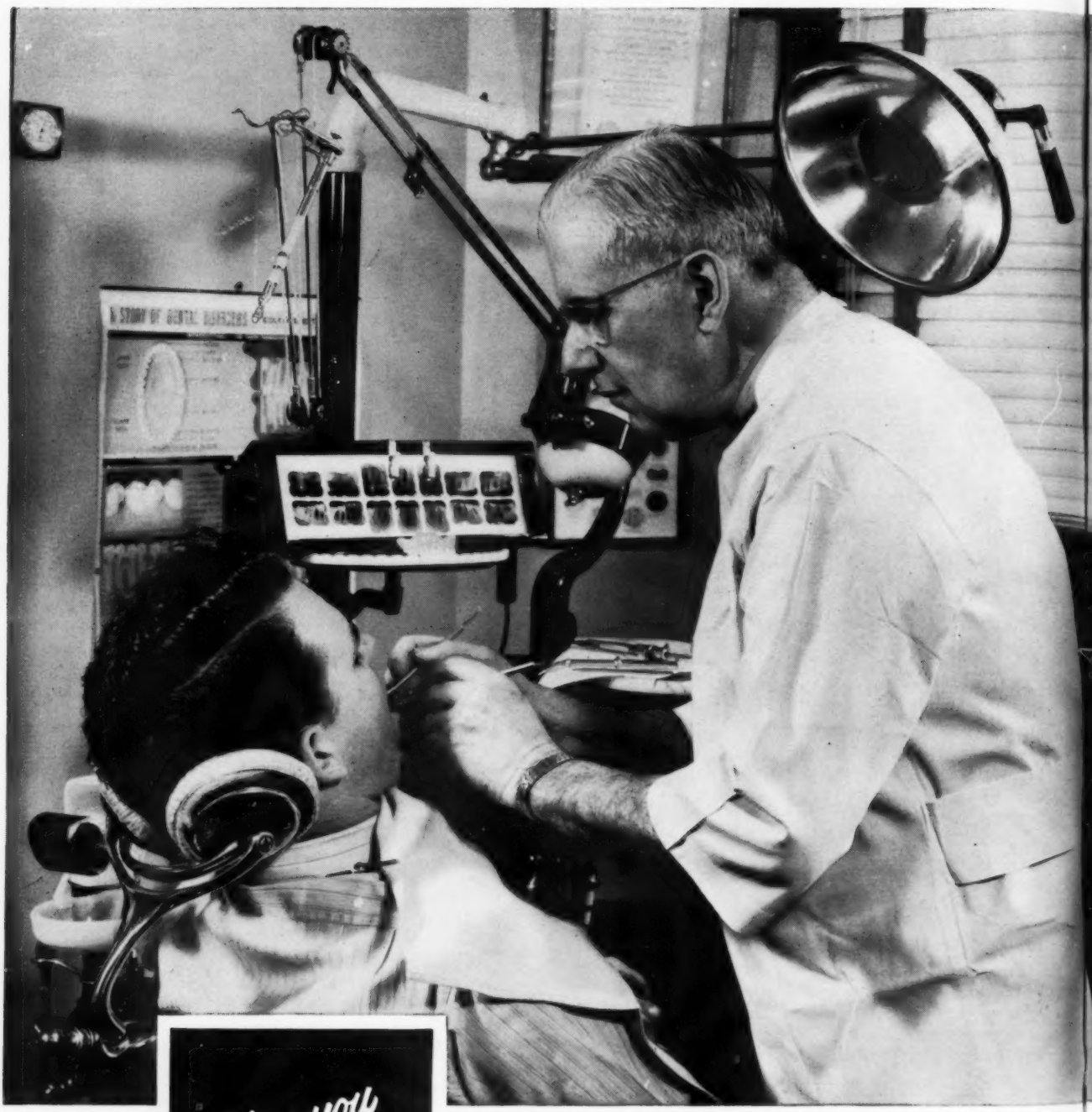
Foundation Names Six to Board

Six new directors were elected by the American Foundation for Pharmaceutical Education at its meeting in New York City last month. These men include: Alvin Brush, president of American Home Products Corp.; Dr. J. Mark Hiebert, executive vice-president of Sterling Drug; Eli Lilly, board chairman of Eli Lilly & Co.; John G. Searle, president of G. D. Searle & Co.; and Dr. Hugo H. Schaefer, president of the American Ass'n of Colleges of Pharmacy.

Charles S. Beardsley, board chairman of Miles Laboratories, is president of the Foundation. Dr. Ernest Little, who has been serving as acting secretary since the death of Dr. E. L. Newcomb, will continue in that post until it can be filled by a full-time official.

Billy B. Van

Billy B. Van, toilet goods manufacturer and noted stage comedian, died November 16 in Newport, N. H. at the age of seventy-two. He was operator of the Billy B. Van Sales Company, Newport, manufacturer of candy, toilet goods and perfumed soaps.



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Nothing is more important in the packaging of your products than the protection of their purity, strength and other qualities. High in chemical durability, the glass package does not change your products. It will not leak, rust nor absorb moisture. Easy to open, easy to use, easy to reseal, it makes the most convenient package. The glass package may be transparent or not as required. It lends itself to individuality in size and shape hence is adaptable to any product. Preferred by consumers because it is safe, sanitary and convenient . . . by retailers because of its sales and merchandising advantages. Anchor Hocking Glass Corporation, Lancaster, Ohio.

Anchorglass*

STANDARD BLAKES

Anchorglass Standard Blakes can be used for a wide variety of drugs and chemicals . . . tablets, pills, capsules, crystals, liquids, hydroscopic products. Moreover, they're economical, tough and durable containers. They're the result of practical engineered designs, consistency in manufacture, uniform distribution of glass, accurate temperature control in annealing, quality control through laboratory tests and regular inspections. *Anchorglass* Blakes are designed for modern shelf stocking. They save shelf space and are adaptable to front and side panel labeling. They are available in amber or emerald green glass in 24 capacities from ¼ to 32 ounces.

ANCHOR*

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Anchor C.T. Caps give economical, dependable, leakproof sealing. They are adaptable for use on a wide range of products which require airtight and liquid-tight sealing. Their scientifically designed deep rolled thread improves holding qualities; permits ample clearance over the glass thread; prevents binding and gives spin-on action which results in fast, low-cost application. Deep, coarse knurls avoid interference with the top of the glass thread, permit free radial movement of the liner and provide a firmer gripping surface for application and removal. *Anchor* C.T. Caps are available in 20 sizes from 18 to 120 mm. Write us for more detailed information on the advantages and economies of *Anchor* C.T. Caps.

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PAPER BOX COLLAPSING

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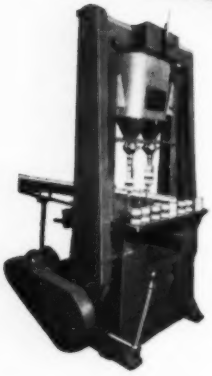

Model MH "BOND" Semi-Automatic TWIN STATION FILLING MACHINE

The makers of the products illustrated, old-timers in the powder-packing field, chose the Model MH Bond Semi-Automatic Twin Station Filling Machine several years ago. Today they are still enthused with its versatility in handling varying-sized containers and widely different materials, with its speed and accuracy in filling cans, jars, cartons and shallow boxes. It is the ideal machine to volume-fill, gross-weigh or pack talcum powder, face powder and other types of cosmetic powders, as well as dry pharmaceuticals, ground spices, cocoa, flour and other fine powdered materials. What's more, with the MH Bond a single operator can fill up to 40 containers per minute with the closest accuracy. If you package cosmetics, drugs, chemicals, *in fact powders of any kind in any type of container,* it will pay you to get in touch with **US.**

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MANAGEMENT FORUM

By Francis Chilson
Industrial Consultant

Insecurity

Numberless polls of working people have listed job security—that is to say—income security—as high among the primary wants. The same feeling of insecurity affects salaried workers and management too. The higher individual income is the greater is the feeling of insecurity.

You can see this vividly in the purchase of farms by city people, particularly people in the higher income brackets. They "want to get away from it all;" they want to be sure that no matter what happens they and their families will have enough to eat and a warm place to sleep. You can see the same influence at work among capitalists who invest vast sums of money in projects that have a good growth potential in the hope of making capital gains which will protect their estates.

During the last war I knew of several men who bought places in the country and stocked them with vast stores of food—canned, dried, frozen—so that whatever befell them they would have something to eat. I know of one victim of insecurity, a man of very considerable wealth, who built underground cellars and refrigerators in which he hoarded a food supply large enough to last him and his family for twenty years! Hoarding of all kinds indicates a feeling of insecurity.

Why? Why do so many people in all walks of life feel so insecure in the richest, most productive, most powerful nation on earth?

I have pondered this problem for a long time and I think I may have one answer. Material progress makes people feel insecure. The more things we have—all of us—the more insecure we feel.

When I was a kid in school studying elementary economics great stress was laid upon *wants*, the desire for things, as the basis of economics. In other words—demand. Business was the procedure by which that demand was met. Then business men discovered that *demand* or *wants* could be stimulated. We have reached a point now where everybody wants everything from hell to breakfast.

It is our unsatisfied demands—wants—that make us feel insecure. We want a new car, a television set, a new home, a refrigerator, an airplane—and God knows what besides. We feel insecure because we may not be able to get all these things; we may lose our jobs; we may not be able to live up to the Jones'; inflation may come; the government may go to hell (meaning that the Democrats may be re-elected); the communists may take over—and God knows what beside.

Psychiatrists tell us that the feeling of insecurity is one of the fundamental factors in all forms of psychoneuroses. Certainly the business of the psychiatrists is booming and the nut factories are full.

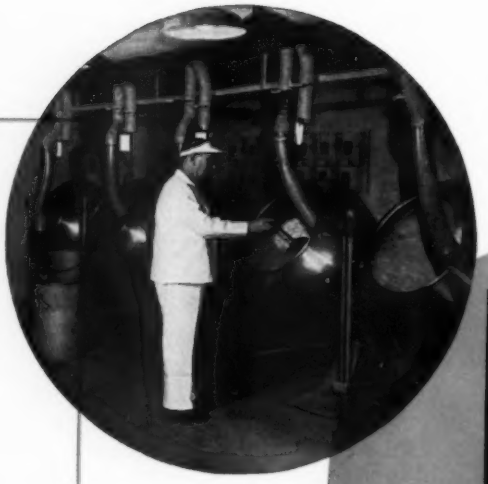
In my humble opinion we can eventually destroy ourselves and our great country if our people fail to banish this feeling of insecurity from their minds.

What We Lack is Faith

We lack faith in ourselves—the faith that was the outstanding characteristic of our pioneering ancestors, who came to this country in worse than cattle boats with nothing but faith in their ability to make a living for themselves regardless of forseeable and unforseeable dangers. That this faith, which made our country great, is rapidly diminishing is attested by the extraordinary number of college graduates who are afraid to take a change; who want jobs with pensions—government jobs; even jobs on municipal police forces and fire departments. These kids go forth to face the future afraid of it. They feel insecure.

We lack faith in our government. We lack faith in the dollar. (In terms of pre-war purchasing power, people tell you it is worth but forty cents and soon it will be worth only twenty. Better buy a couple of extra hams before the dollar slides any lower.) People who howl continually about the decline in the purchas-

Where you see the Rexall sign....



and you see it nationwide . . . you see scores of products made on Stokes machines.

Low cost production . . . high quality products . . . speedy machines that carry a heavy schedule without failure . . . these are necessities for a manufacturing department supplying consumer goods to thousands of retail outlets throughout the country.

Rexall's big St. Louis plant is generously equipped with Stokes machines . . . numerous models of tabletting presses, coating pans and polishing heads, mixers and granulators, tube-filling, closing and sealing machines . . . on which a huge production of widely used Rexall products is maintained.

Not alone in Rexall plants, but all through the world Stokes machines are used in pharmaceutical laboratories for grinding, mixing, drying, slugging, tabletting, finishing, tube-filling, extracting, distilling, concentrating, of countless pharmaceutical products.

Ask Stokes for assistance on tablet formulae, punch and die design, improved procedures.

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ing power of the dollar forget completely that they now have a lot more of them. And why compare today's dollar with the 1936 dollar? Why not compare it with the 1926 or even the 1906 dollar when your old man, who then worked sixty hours for twelve or fourteen dollars a week, could load a market basket full of food for a dollar and then get a load on himself for another dollar on the way home? Of course that 1826 dollar was really something. Whiskey was a penny a slug of about three ounces with a free lunch thrown in. A quarter would buy a lodging for the night in a good hostelry. But who the hell would go back to 1826 if he could, or even 1936?

Let's stop making futile comparisons with the past. Let's keep looking forward. Let us recover faith in ourselves.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Self-Cleaning Filter

A new industrial filter, possessing the important advantage of being self-cleaning, has recently been introduced by the Sparkler Manufacturing Company, Mundelein, Ill. Designated the Model SC series, the filter is designed for any filtering process where large amounts of solids are involved and where it is difficult or inconvenient to open the filter for cleaning. It is especially adaptable, also, for use with any solution where water can be used to flush out the filter aid.

A simple, mechanical arrangement assures positive cleaning action whenever desired. This arrangement consists of having nylon brushes set between the unit's circular filter discs. Ends of the brushes are connected to a revolving brush cage that extends the length of the filter.

When the filter requires cleaning, water is flushed through the filter to the outlet drain, while this cage is revolved either by hand or motor powered means. Thus, the brushes, which are in contact with the discs on either side, sweep these surfaces clean. All matter that has accumulated on the discs drops to the bottom of the filter and is quickly washed through the outlet drain. In many applications, complete cleaning has been accomplished in only 2 to 5 minutes. Sparkler also points out that it is possible to use a backwash operation in conjunction with the brushes when clean backwash water or other liquid is available. Since the brushes do the bulk of the work, very little backwash water is actually required, thereby keeping costs to a minimum.

Construction of the filtering unit itself consists of a series of circular discs mounted on a hollow center shaft and enclosed in a horizontal cylindrical pressure tank. Each disc is perforated on both sides and is covered by a synthetic cloth which is sealed around the edge. Spacer rings between discs hold the cloth in place. The depth of this ring may be varied in accordance with the thickness of cake desired on the disc.

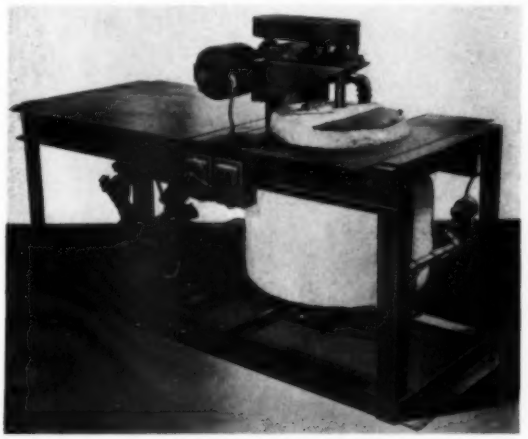
Arrangement and construction of the discs is such that when using filter aid in the filter, only a very short time is required for precoating, since a rather dense, woven nylon cloth can be used if desired. Also, fullest utilization of the filter's volume is provided, resulting in unusually high flow rates.

The Model SC series is available in a wide range of capacities, and can be made of corrosion resistant materials throughout.

Lab Kettle

A new versatile kettle for laboratory or small batch use has been announced by the Chaffee Design and Manufacturing Company, East Aurora, New York, manufacturers of special machinery and equipment.

This new kettle is completely self-contained in an all steel table frame with built-in motors to drive scraper-agitator and pump for re-circulating or removing contents. The elements of the batch are loaded into the thickly insulated kettle through a half cover which is held down by thumb screws when closed during the batch run. Thermostatically controlled gas heat oper-



ates up to 400-500°F temperatures. The scraper-agitator in the kettle is driven and controlled by a variable speed motor.

Under the table top is a pump that removes the contents from the bottom of the kettle through a flush valve at temperatures up to 500°F. The pump discharges the batch into a manifold and then to open pans for slow cooling, or recirculates the batch back to the top of the kettle, or through a strainer for cleaning or "grease working," or through a relief valve, or to other extra equipment such as a flaker.

Such a wide choice of batch handling meets the unusual flexibility required in laboratory work.

Ample space is provided on top of the table for additional laboratory cooling equipment or other similar equipment that may be required for special handling of batches. Experimental runs in this kettle eliminate the possible wasting of large quantities of material and tying up large production facilities.

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Versatility is the keynote of S & S Universal Filling Machines; more than 150 different kinds of materials—drugs . . . cosmetics . . . foods . . . powders . . . pastes . . . and other household products—can be packaged economically, speedily. The Universal Filler automatically, and precisely, fills containers of varying shapes and sizes—from ¼ ounce up to 5 pounds—at speeds of 15-30 packages per minute. Write for complete details.

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Photo-micrographs illustrate value of wool felt as a superior filter medium.

Photomicrograph (25 diam. enlargement) of ordinary filter cloth . . . Drawing shows how dust can escape through open mesh.

Photomicrograph (25 diam. enlargement) of special, pressed wool felt . . . Drawing shows how dust particles are trapped by the density of the felt while air flows through in constant volume.

Even the split-micron dust particle will not penetrate the microscopic pores of the cylindrical bag of special felt in the MIKRO-COLLECTOR.*

Moreover, the bag is kept constantly clean by the Hersey automatic, reverse-jet cleaning ring which flexes the bag while moving up and down its outer surface—thus assuring free airflow, phenomenal filter rates and far higher capacity per given area of filter fabric.

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SEND FOR *actual sample of felt that makes the* MIKRO-COLLECTOR *so outstanding . . . also case histories revealing dollar and cents savings through its use.*

*Patents applied for by H. J. Hersey, Jr., and Pulverizing Machinery Company.

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Revolving Unit Heater

In the plant of a large manufacturer of pharmaceuticals in New Jersey, production of a new drug necessitated a large increase in drying oven capacity.

The existing equipment consisted of seven drying racks in cabinet type dryers heated by steam coils. Maximum temperature was 160°F. and air movement was very limited. The dryers were enclosed by masonry walls in a room 17′ x 25′ x 16′ high to reduce heat in the adjacent manufacturing area.

A single Wing Turbine Driven Unit Heater with 4-way recolving discharge outlets was installed, suspended from the ceiling in the center of the room, thereby converting the entire room into one large dryer. The ambient temperature was raised from 160°F. to over 230°F. but an automatic control was installed to keep a constant 210°F. Uniform temperatures are insured by the revolving discharge outlets and the excellent air movement produced by the turbine driven fan (an electric motor is not usable at such high temperatures).

A production increase of over 500 per cent was achieved.

Hand Pallet Truck

An outstanding pallet load-lift designed and built on a radically new principle is being offered by the Market Forge Company of Everett, Mass. It is the only aluminum alloy pallet lift truck available and features special wheels that automatically retract when the forks are in a lowered position.

The truck, supported on two front wheels and two auxiliary wheels on a very short wheel base, turns around "on a dime." It cannot be cornered and will lift wherever a man can stand.

The rear wheels are 1″ above the floor and thereby enter and leave the pallet, without interference or damage to the bottom boards. This eliminates the necessity of bevelling bottom boards or exerting extra effort in inserting or removing forks. Operating the lifting handle automatically brings rear load wheels down to the floor and raises auxiliary wheels.

The rear wheels are closely centered and tandem articulated and easily cross over floor obstructions, elevator inequalities, etc.

The "flying handle" danger is completely eliminated because there is no connection between the pulling and lifting handle.

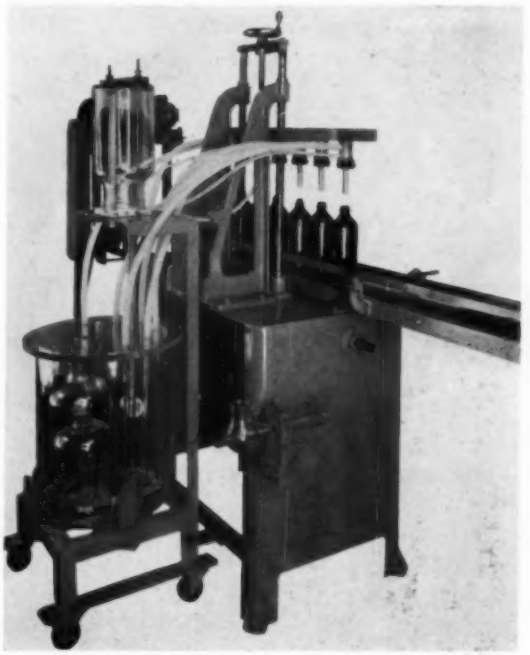
Tumbler Mixer

Some of the outstanding features of this mixer are: Can be tilted through a 90° arc for complete mixing at any angle; drive belt in constant tension regardless of load; will hold any size container—from 5 gallon cans to 1 ounce bottles, square, round or irregular; easily portable or bolted down if desired and, built for a lifetime of dependable use.

The unusually low price of this Tumbler-Mixer coupled with the outstanding features make it a most desirable item for the laboratory and many other uses.

Acid Filler

The MRM Company, Inc., 191 Berry Street, Brooklyn, N. Y., manufacturers of Automatic and Semi-Automatic Liquid Filling Equipment, announces the completion of a Semi-Automatic Filling Machine intended for filling C.P. Grade Acids. The acids that will be filled on this specially designed machine are



Hydrochloric, Nitric and Sulphuric Acids, in addition to C.P. alkalis such as Ammonium Hydroxide. The Acid Filler will fill acid bottles ranging in size up to the 5 pint bottle. Rate of fill on 5 pint bottles is established conservatively as two fills per spout per minute.

Special materials have been utilized in handling the highly corrosive acids and to avoid contamination of the liquids. These materials consist of Teflon, Polyethylene and Pyrex Glass.

This machine operates on the vacuum principle with the vacuum being drawn by means of a Pyrex Glass steam air jet pump.

Acid bottles are fed into the filling mahine by means of a stainless steel conveyor actuated by an operating lever raising or lowering the spout bar for filling into the acid bottles.

Motors are furnished totally enclosed or explosion proof.

The MRM Company, Inc., is presently constructing similar machinery for the filling of acids and alkali into 6½ gallon and 13 gallon carboys.

Punch Box

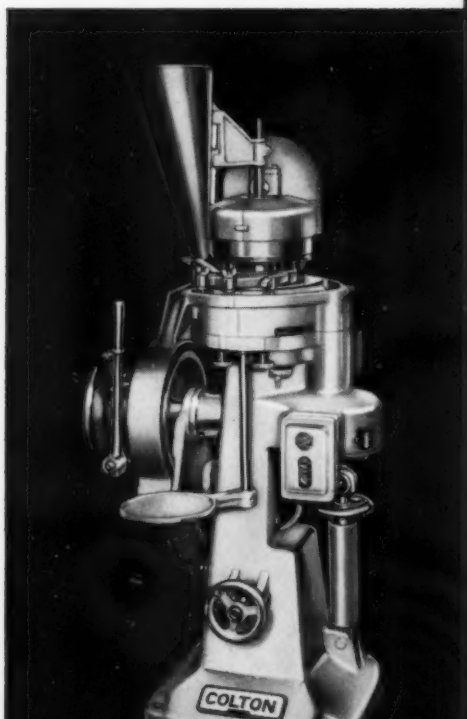
A new storage box for punches and dies including a vapor type rust inhibitor is now available from F. J. Stokes Machine Co., Philadelphia 20, Pa., makers of punches and dies and many types of compressing machines in which punches and dies are used.

Arthur Colton Company

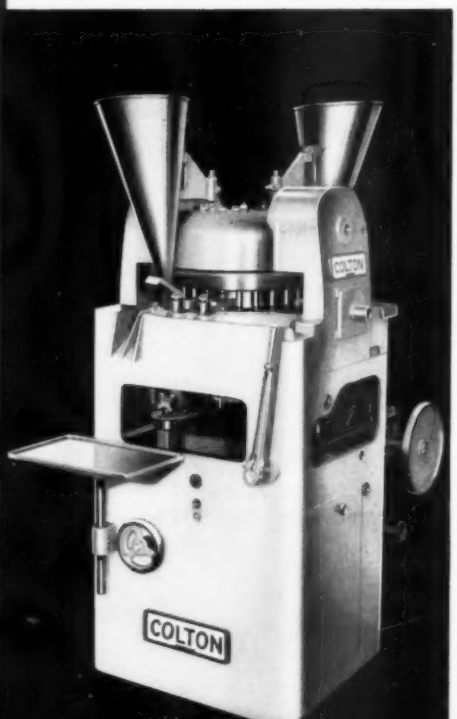
presents

THE NEW COLTON PRECISION "TWINS"

bringing to the TABLETING INDUSTRY ABSOLUTE PRECISION with CONTINUOUS HIGH SPEED PRODUCTION AND WIDE VERSATILITY



No. 216 Rotary Tablet Press: up to 800 tablets a minute; max. dia. ⅜"; max. depth fill 11/16"; 16 punches and dies.



Nos. 227 and 233 Rotary Tablet Presses: No. 227—up to 1800 tablets a minute; max. dia. ½"; max. depth fill ¾"; 27 punches and dies. No. 233—up to 2250 tablets a minute; max. dia. 7/16"; max. depth fill ¾"; 33 punches and dies.

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The new container accommodates complete sets of punches and dies for both the B-2 and BB-2 Rotary tabletting presses.

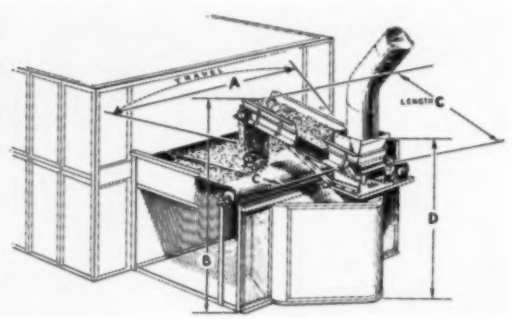
The box is compact in size (17" long, 6-½" wide, 7" deep) and therefore readily moved from storage to the tablet machine, an advantage where keeping sets intact and in perfect condition is a problem.

Dryer Feed

The accompanying isometric sketch shows a hydraulically powered oscillating feed recently developed by Proctor & Schwartz, Inc.

The purpose of the feed is to distribute evenly and uniformly upon a wide conveyor any loose, flaky or granular material. The hydraulic power gives simple and accurate control of the speed and travel of oscillation. It further permits a smooth reversal at controlled rates . . . impossible with other means of oscillation. Thus it is possible to load an even bed of material on the main conveyor from the feed conveyor, insuring a uniform density of load from side to side and along the length of travel of the main conveyor.

A hopper, which is part of the equipment, receives material from the feed chute and deposits it on the



oscillating feeding conveyor. The speed of the feed conveyor can be adjusted to change the loading characteristics. The length of the feed conveyor can be supplied to proper feeding. The feed conveyor is mounted on the top of a column, providing it with a fulcrum point and a mount for the oscillating controls. These oscillating controls are quickly adjustable so as to limit the travel to obtain the desired path over the main conveyor. Mounted within the streamlined cover of the supporting stand is the self-contained pump unit, hydraulic cylinders, and other controls for the equipment.

Referring to the sketch, dimensions labled A, B, C, and D may be varied to suit customer's requirements. Further details of construction and quotations will be gladly supplied upon further request.

Patterson Screens

A new 24-page brochure on Patterson Gyrocentric Screens for wet and dry separation of chemicals, plastic powders, crushed rock, abrasives, adhesives, soap powders, refractories, paint, enamel slip and frit, for de-watering and liquid recovery processes, and other types of production separation operations, has been published by The Patterson Foundry and Machine Company, East Liverpool, Ohio.

The brochure illustrates 22 standard Patterson Gyrocentric Screens, and includes installation photographs, Screen specifications, drawings, and detailed information on how Patterson Screens are used in various industries.

Copies of the new Patterson brochure, "Gyrocentric Screens," may be obtained from this publication or direct from The Patterson Foundry and Machine Co., East Liverpool, Ohio.

Straitwall Vials

The Foster-Forbes Glass Co. of Marion, Indiana, have issued new literature on their Straitwall vials, displaying the ten various sizes, each fitted with a plastic stopper. Among the advantages listed are that the straight sidewalls speed filling and emptying, typed labels may be inserted easily, the hollow stoppers add extra room for pills and capsules, and cotton fillers are easily inserted and removed.

Continuous Stream Feeder

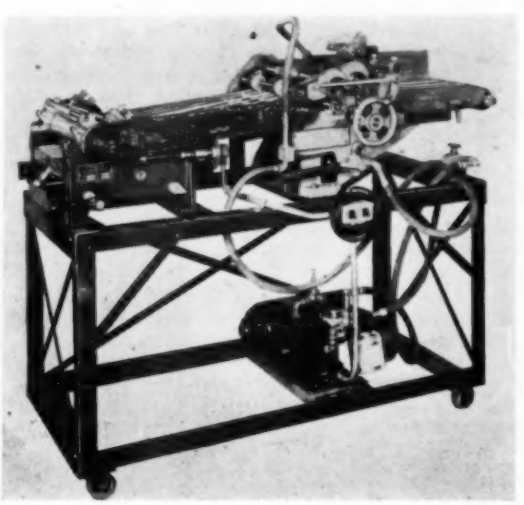
A continuous type automatic feed gluing machine of unusually simple design is being offered by Potdevin Machine Co., of Brooklyn, N. Y. The need for a low cost, efficient, automatic gluer prompted its development.

The entire unit, feeder and gluing machine, is permanently mounted on a portable stand. The operator controls the speed at which the sheets are fed, or the control can be permanently set to feed the sheets at pre-determined intervals. Feeds any weight of paper up to 5 ply index.

Stock is fanned out on the feeding table and tapes convey the sheet to the automatic air wheel which feeds the sheet into the gluing machine. Side guides insure accurate sheet control. An inexperienced operator quickly learns how to control the sheet delivery by use of a foot pedal located in any convenient position.

This automatic feed gluer can be furnished in 12", 21" or 27" widths.

(Continued on page 816)



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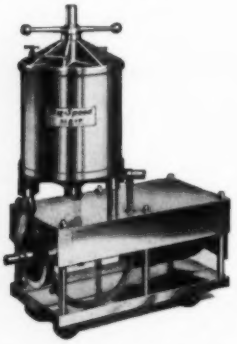
Alsop Mixing Tanks make your mixing and blending operations extra easy, fast, efficient. The all-welded stainless steel construction, rounded corners, and the highly polished, crevice-free surfaces mean less time and labor in cleaning. The shorter legs makes the whole Tank lower, easier-to-load and operate. For easier, faster mixing—for efficient, economical operation, specify Alsop Mixing and Storage Tanks—sizes from 5 to 300 gallons capacity.



Low-Cost Filtration

This Alsop "Sealed-Disc" Filter assures uniform, positive filtration at lowest cost. Its simplicity, portability and compactness means convenience and speed in operation. Made in Stainless Steel, Brass and Bronze, etc., in a wide range of sizes and capacities.

Our new catalogue completely describes our Mixing and Storage Tanks, Filters, and Portable Mixers. Write to Alsop Engineering Corporation, 512 Cass Street, Milldale, Conn.

ALSOP ENGINEERING CORP.

Filters, Filter Discs, Mixers, Agitators, Pumps and Tanks

Management Forum

(*Continued from page 815*)

Vial Filler

Engineered to meet the needs of the pharmaceutical industry for an automatic high speed liquid filler, the new PerfeKtum Vialfil, Model CF-4 has been introduced by Popper & Sons, Inc., 300 Fourth Avenue, New York 10. It is designed to deliver accurately measured quantities of liquids ranging up to 20cc into vials or small bottles—four at a time—at rates as high as 120 per minute. The machine consists of an endless stainless steel conveyor belt with continuous motion designed for installation into a modern high speed straight line packaging system, as it is presently being used by E. R. Squibb & Sons of New Brunswick, N. J.

Easy to operate, the Vialfil is virtually maintenance-free and may readily be set up to handle the different size vials within its range. The unique design of the piston-type positive shut-off-valve permits handling liquids including the following: aqueous preparations, oils of high viscosity, and suspensions. Each of the four filling heads consists of a separate micrometer which insures rapid foolproof volumetric adjustment as well as accuracy at any setting.

A sturdy yet simple construction makes it easy for an attendant to disassemble the filling units for cleaning and sterilizing. All parts of the machine coming in contact with the liquid are fabricated with stainless steel. A knurled adjustment screw is provided for regulating the amount of drawback in the filling needles at the completion of the delivery stroke—for final drop elimination. An added feature of the Vialfil is a detector device which insures—no vial, no fill.

Load-Mobile

Over the past five years, this electric lift truck manufactured by the Market Forge Co., of Everett, Mass. has found outstanding success in a wide variety of industrial plants.

The basic design of the Load-Mobile—including the 3-way operating positions—remains the same. Most changes have to do with easier accessibility to electrical equipment and auxiliary equipment such as the lifting ram and the hydraulic pump used for lifting.

Here are the important improvements:

1. A "high-low" switch is now provided for easier maneuverability in close quarters. When the button is at "low," the truck moves at slow speed regardless of the position of the operating pedal. When the button is at "high" the operator controls the speed—either high or low—by means of the foot pedal.

2. Spring-mounted casters have been added to increase stability (especially in narrow models.) These casters normally clear the floor but when the truck tilts (as in making a sharp curve, etc.) the heavy springs right it promptly. This new feature allows the truck to pass over obstructions, inclines, etc. without difficulty.

3. Freer use of sealed ball-bearings in the control system means that just a light touch on the foot pedal is all that's needed to put it in required position.

4. A heavy roller chain operates the brake instead of an enclosed cable.

5. The hydraulic lifting mechanism is arranged in a vertical position at the front end of the hood where it is less likely to be damaged in transit over rough floors.

The Load-Mobile—with all these new improvements—is available as a lift truck for conventional skid platforms; as a pallet truck for handling double-faced pallets; as a freight and pick-up truck; and as a tractor.

Straddle Truck

LYON-Raymond Corporation has just issued a new bulletin describing the Straddle Type SpaceMaker Electric Tiering Truck for handling double-faced pallets.

Illustrations show the company's SpaceMaker Electric Truck with the telescopic frame raised to its full height and the non-telescopic model with the forks in a low position.

The design of the truck incorporates several features including light weight, short length and unusual maneuverability.

Installation photos show the actual on-the-job views of the truck operating in narrow aisles.

Line drawings are included to show all dimensions of the truck and full specifications are described.

Write to LYON-Raymond Corporation, 76141 Madison Street, Greene, N. Y. for your copy of Bulletin #702.

New Colton Press

Two new high-speed rotary tablet presses, capable of high speed production of a wide range of tablet sizes and plastic preforms, are announced by Arthur Colton Company, Division of Snyder Tool & Engineering Company, 3400 E. Lafayette Ave., Detroit 7, Michigan.

One unit is the Colton No. 227 Double Rotary Tablet Press which has a maximum production capacity of 1575 tablets a minute; maximum tablet diameter capacity of ½", and a maximum depth of cell of ¾".

There are 27 punches and dies, and two stamping stations. Maximum pressure exerted is 5,000 pounds. Uniformly accurate tablet weight is assured by a micrometer cell adjustment. In operation, the dies are overfilled and leveled off to proper cell depth. Variable speed drive permits operating speeds to be adjusted to suit different types of tablet material. Power is transmitted to the head through a twin disc clutch. An adjustable automatic excess pressure release protects machine elements against accidental damage. Pressure release settings, clutch lever and lower pressure roll adjustments are within easy reach of the operator.

(*Continued on page 825*)

STRAIGHT-LINE

VACUUM FILLER

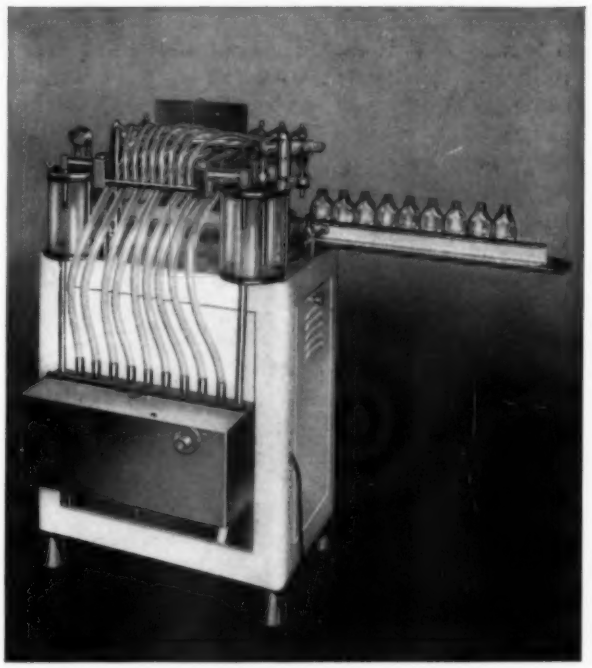


Photo of Rear view of the New Model B-49 Straight-Line Vacuum Filler for any container up to and including gallons

New Semi-Automatic Machine Introduces More Comprehensive Automatic Machine Operation!

A versatile machine for filling liquids and semi-liquids. Designed for quick, on-the-job changeover for any container up to gallon size and with efficient speeds on all size containers without undue pressure upon the operator.

Mechanical innovations introduce more comprehensive automatic machine operation for eliminating hand servicing. The product handling system is designed for quick clean-up after runs and the operating mechanism is simple and substantial for many years of enduring, uninterrupted filling service.

Seldom does a new machine, so quickly, make a place for itself in established filling set-ups either on steady production or as a versatile standby unit for peak loads. The Model B-49 Bulletin will give you the interesting details; write for it today.

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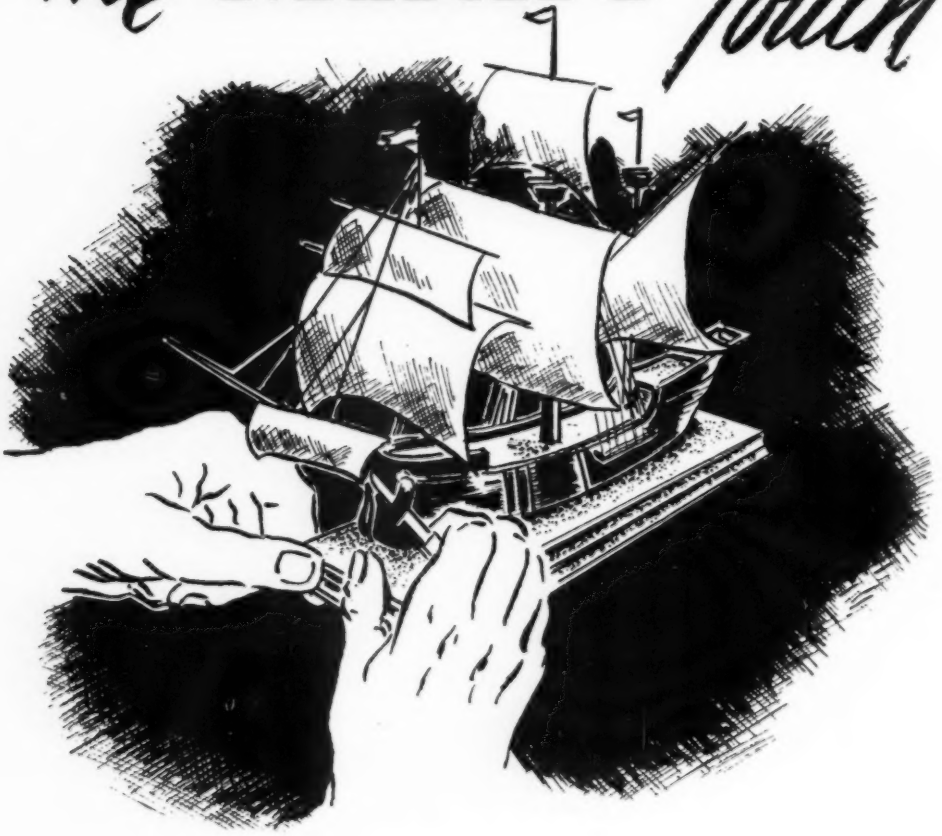

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PATENT THOUGHTS AND TRENDS

*by Thomas Cifelli, Jr., Patent Attorney**

Trade Secrets in Patent Cases

Perhaps some readers with long memories will recall that back in April of 1947 this department suggested that process patents were enforceable in spite of the widespread notion that one was wasting his money in obtaining a patent limited to the process of making or doing something without any protection on the material or thing made. The point behind this notion is that it is difficult to know just what is being done in the other fellow's plant and one cannot tell how a chemical is made merely by looking at it or even by testing it.

The writer's thesis was that this widespread notion, plausible as it may seem, was erroneous as the Federal courts have very useful machinery for *detecting* and *proving* infringement of patented processes. The Federal courts, under uniform rules laid down by the U. S. Supreme Court in the late thirties, are quite liberal in permitting litigants to obtain evidence, while at the same time protecting the parties against "fishing expeditions" designed to pry into the other fellow's trade or other business secrets.

Since the article referred to a number of instances have occurred where the courts did in fact permit inquiry as suggested in the article. Indeed, only the other day the press carried an item relating to a pending patent case involving Linde Air Products Co. against Stuart Laboratories. In this case which is before the New Jersey Federal District Court, the press reported that "Judge Fake barred everyone from the court room except counsel, witnesses and court reporters, and ordered doors to the court room locked and guarded on the outside by deputy marshals." The purpose of this unusual action was to permit the taking of testimony on a secret formula for making synthetic star rubies and sapphires.

The only reason this subject is being discussed again in these columns is because the observations of this writer indicate that all too many people still do not realize that process patent claims can be practically enforced in the courts. This of course assumes that the process claims are valid and that there is some basis for hailing an alleged infringer into court.

Ammoniated Dentifrices

What is believed to be the first patent on the so-called ammoniated dentifrices was recently issued to George P. Butterfield of Des Plaines, Illinois and assigned to Amion, Inc. of Chicago. This is U. S. patent No. 2,526,614.

Butterfield discloses a preparation comprising a dry mixture of urea, urease or a substance furnishing urease and a carrier. The idea of this preparation is that in the presence of moisture the urea is slowly hydrolyzed under the enzymatic action of the urease to form ammonium carbonate, which further breaks down to produce ammonia. When the preparation is applied to the cavities or surfaces of the human body, as for instance to the oral cavity or to the skin, the moisture present makes possible the enzymatic action referred to, with the liberation of ammonia. According to Butterfield, the action of the ammonia and residual urea is bactericidal and antienzymatic to acidogenic organisms, such as Lactobacillus acidophilus, with the result that such bacteria as well as yeast cells are largely destroyed. Also, Butterfield claims that the products of the enzymatic reaction act to prevent any acidogenic organisms present from producing lactic acid.

It seems that Lactobacillus acidophilus and yeast organisms are generally present in great numbers in the saliva of all persons who have active dental caries. Lactobacillus acidophilus metabolizes glucose, lactose and other sugars into products essential to the growth of such bacteria and also into end products such as lactic acid, thereby being a rather undesirable creature. Where Lactobacillus acidophilus flourish in the mouth the pH of the saliva is almost always markedly changed from the normal value by the presence of the lactic acid produced by the bacteria. As a result a decidedly acid condition prevails, particularly on the tooth enamel and under the mucin plaques. It is believed that lactic acid brings about the erosion or dissolution of the tooth enamel and thus paves the way for the development of the organisms which cause tooth decay.

It is of course well known that various alkaline and detergent substances have been introduced into the mouth in the form of rinses, pastes, powders and gums, to alleviate the situation. However such substances according to Butterfield will not inhibit the growth or activity of the acidogenic organisms in causing the breaking down of sugars into lactic acid. Furthermore, Butterfield says that substances such as sugars and starches which latter are converted within the mouth into sugars, and phosphates, which have been established to be stimulative of bacterial growth, may in fact be introduced along with the alkaline and detergent materials, which is certainly not good, as these substances foster the growth of L. acidophilus and yeasts.

Butterfield claims that his composition is of such a nature that only bactericidal substances are introduced or produced when the preparation is applied within the oral cavity or upon the skin.

In one form of the invention the ingredients are incorporated into a dentifrice in the form of a dry powder. When used the full enzymatic reaction occurs only slowly and over a long period of time. Therefore, if such a dentifrice is used twice a day or oftener, Butterfield says it will maintain a condition such that L. acidophilus and yeast cells will be prevented from flourishing and the production of lactic acid will also be inhibited. It is said that in vitro tests using standard bacteriological methods demonstrate that within twenty-four hours after beginning the use of a dentifrice embodying Butterfield's invention, L. acidophilus completely disappear or are markedly reduced in numbers within the area treated. In vivo use is said to show continuous marked reduction in the growth of L. acidophilua and also in a stoppage of lactic acid production

*Gaylor, Cifelli & Juriek, Newark, N. J.

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during the use of the dentifrice in the usual way.

The topical application of Butterfields preparation is said to produce enough ammonia to dissolve the mucin plaques and to prevent the reforming of said plaques. In this connection, sufficient ammonia is said to be present at all times in the mouth of the normal noncarious individual so that the mucin that is normally present in saliva is dissolved and the formation of mucin into plaques upon the tooth surfaces is prevented. Where however the natural protective enzyme systems have been destroyed through lowering of the pH by the activity of acidogenic organisms, mucin plaques form upon the teeth and protect and promote the growth of colonies of bacteria which lie beneath them, and also confine the acid medium necessary to the growth and development of the acidogenic organisms beneath such plaques.

As above stated, the ingredients employed in Butterfield's composition are urea and urease or a substance capable of furnishing urease. Crystalline urease may be used or jack bean meal, watermelon seed meal, soy bean meal or other urease-bearing meals may be employed. Where the preparation is to be used in the form of a dentifrice, the urea and urease, or urease-bearing material may be mixed with the usual dry dentifrice ingredients, such as precipitated calcium carbonate, together with the usual sweetening and flavoring agents. Bentonite may optionally be used in the preparation. In place of calcium carbonate, magnesium or barium carbonate, or sodium carbonate may be used.

Butterfield gives as the preferred percentages by weight of the active ingredients in his preparation the following formula:

Urea	10 to 30 per cent
Urease (or an equivalent amount of urease-bearing material)	0.0006 to 0.0024 per cent

The chemical mechanism of the active ingredients is that when the urea and urease are brought into the presence of moisture, such as saliva in the mouth, hydrolysis of the urea occurs to form ammonium carbonate, which ultimately breaks down to ammonia, carbon dioxide and water.

As prepared for shipment or storage Butterfield says that the preparation must be substantially moisture-free to prevent reaction between the urea and its enzyme before topical use. Heavy metals and quinones are poisonous to urease and must therefore be carefully excluded.

When the active ingredients are incorporated into a dentifrice, the balance of the composition is made up of calcium carbonate, or magnesium carbonate, as the carrier and cleansing agent, and any other desired constituent of the dentifrice.

Butterfield claims that while the art of releasing ammonia from urea in the presence of its enzyme, urease, is well known, it has never been applied to a therapeutic use. It is said that the application of the principle to a dentifrice presented several problems. First, urea in concentrations of over 30 per cent is irritating to the mucus membrane and injurious to all the enzyme systems in the mouth. A percentage between 15 to 30 per cent was found by Butterfield to be optimum. Furthermore, since the reaction would be too rapid if only urea and crystalline urease were present, the ingredients are selected in such a manner that the reaction is slowed down. For this reason one of the meals containing substantial amounts of urease is normally employed, jack bean meal being preferred.

All of the five product claims call for the use of urea and urease or urease-containing substance. Claim 1 gives an idea of the protection:

A topical preparation having an anti-enzymatic activity toward acidogenic organisms of the lactobacilli type, comprising a dry mixture capable of reacting with moisture in the presence of Lactobacillus acidophilus to liberate ammonia, said mixture containing urea, a urease-containing substance and a carrier therefor compatible with the urea-urease function of liberating ammonia in the presence of moisture, said urea being present in an amount not over 30 per cent by weight of said mixtures.

Processes for Making Cinnamaldehyde and Beta-Methyl-Cyclo-Pentadecanone

Two interesting patents were recently granted on improved processes for making aromatic (i.e. odoriferous) materials. One deals with a process for making cinnamaldehyde, which won U. S. patent 2,529,186 for H. H. Richmond, the patent being assigned to U. S. Rubber Company; and the other patent (U. S. 2,526,171) was obtained by Max Stoll of Switzerland and assigned to Firmenich & Co.

In the cinnamaldehyde process, the well known reaction involving the condensation of acetaldehyde and benzaldehyde in the presence of alkaline catalysts was employed. The point of the patent is that a high yield of the order of 75-85 per cent, based on the benzaldehyde is obtained by the trick of adding the acetaldehyde gradually to the benzaldehyde. The patent says that if the order of addition is reversed or if the reagents are mixed simultaneously low yields of the order of 18 and 49 per cent, respectively, are obtained.

The example given in the patent is repeated here because in addition to its being of probable interest for its contents, it appears to be a well-written example and probably made the patent attorney who filed and prosecuted the application happy. In this connection specific examples in chemical patent applications cannot be too detailed. The trouble is the other way around, that is many examples are quite vague, leading to considerable delay in prosecution and opening up the patent to attack on the ground of insufficient disclosure.

Example:

To a 2000 cc. three-necked flask equipped with a thermometer, a reflux condenser, a stirrer, and a calibrated addition burette, jacketed so that it can be cooled by tap water, and whose tip is inserted below the surface of the reaction mixture, there is introduced 150 g. of technical benzaldehyde and a solution of 3.0 g. of sodium hydroxide in from 500 to 1300, preferably about 1000 cc. of water. The temperature of the mixture is raised, with stirring, to 70°C. The temperature 70°C is about the optimum temperature for high yields concurrent with the other conditions described in this example but the reaction can be carried out in the range 60-80°C. Maintaining this temperature, 48 grams of acetaldehyde is introduced through the addition burette, uniformly over a period of 1½ hours. This constitutes the period for one-half of the reaction. The alkalinity of the reaction mixture is periodically checked and adjusted so that it is pink to phenolphthalein indicator by the addition of small quantities of sodium hydroxide solution. This acidification is due to the oxidation of benzaldehyde to benzoic acid. The optimum alkalinity is that indicated by the pink color of the phenolphthalein indicator. The stirring is continued for another hour and a half at the same temperature.

The reaction mixture is then acidified to pH with 10 per cent aqueous sulfuric acid solution, and allowed to cool to room temperature; the excess sulfuric acid and any benzoic acid present is neutralized with an excess of sodium bicarbonate bringing the pH to 8. The slightly alkaline mixture is extracted with a water insoluble organic solvent (200 cc. of benzene) and the whole is subsequently poured into a separatory funnel. The organic layer is separated; most of the solvent and all the water is removed by atmospheric flash distillation, and the residue consisting of benzaldehyde, cinnamaldehyde, and high boiling by-products, fractionated in vacuo.

The products are: 63.9 g. benzaldehyde boiling at 63°C. and 15 mm. n_D=1.546; 86.9 g. cinnamaldehyde boiling at 123°C. and 15 mm. n_D=1.622, and a higher boiling residue of 25 g. This represents a yield of 81 per cent and a conversion of 46 per cent. By analysis the cinnamaldehyde is found to be 99 per cent pure.

The Firmenich patent deals with a process for (*Continued on page 848*)

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YOUR TRADE-MARK RECORD

by John H. Graham
International Patent and Trade-Mark Consultant

These Foolish Things—

Often, when the pristine page lies before me waiting for this column, I think of these foolish things called trade-marks. In business, normally, there should be no reason for registering a trade-mark.

When the goods are similar and confusion in the public mind is obvious between two words, no one gains by continuing the sales. Let us take an example. There is a trade-mark TUMS for tablets having anti-acid action. They are well known. They enjoy a reputation. Supposing a company decides to put out DUMS in challenge. It means extensive advertising for DUMS and in the long run, an expensive lawsuit to settle the differences. Who gains from this? Certainly not the owners of DUMS who for a fleeting second enjoy the financial returns of the reputation and advertising technique of the owners of TUMS.

Certainly not the owners of TUMS, who spend plenty on advertising and add to this "in the red" figure some heavy counsel's fees for defending their trade-mark. There are definitely no advantages in getting too close to another person's trade-mark.

In business there should not normally be need for registering marks, except for the question of the extensive areas and regions in the U. S. A.

The real and practical use of registration is so that you can serve notice on your trade and associated professions of your rights in the mark. One of the most important advantages which the Lanham Act (1946) gave to the trade-mark owner was the fact that registration should be construed as notice to the world at large of ownership of the mark.

Thus, no further advice is necessary that the mark is yours. You can stand fully upon your registration.

Genuine manufacturers will not deliberately usurp another's mark for the reasons advanced above. It is bad business both financially and morally. So we get back to the premise that in honest trade, marks need not be registered except for the advantage of telling legitimate competitors that you have such and such a mark.

In the Industries with which this column is concerned, it is necessary in some way to give such notice to the trade. Marks for Cosmetics, Toilet goods, soaps and Drugs constitute a large percentage of all the marks registered.

Thus, the Trade-Mark Record, which this column keeps up to date is invaluable to all of you in these fields.

By using the basic Volume and the marks given monthly herein, it is possible to avoid the pitfalls of costly legal suits in trade-mark matters.

The original Record was completed up to and inclusive of December 31, 1945. Now, as will appear elsewhere in these pages, a Supplement of the Trade-Mark Record will shortly be available bringing up-to-date from December 1945 to the end of August 1950, the accumulated marks in that period.

With the original Record, the Supplement and this column, a clear picture can be always seen as to what is going on in the trade-mark world.

It is significant that, in the five years between the main Record and its first supplement, over 7000 marks have been registered in the toilet goods, cosmetics and soap fields. Because of the close competition which these figures obviously intimate, registration is of value to each and every owner of a trade-mark.

The day has long since gone when word of mouth advice was sufficient to protect the interests of proprietaryship of a mark. The essential use of registration is to spell out your claim. That way, these foolish things called trade-marks are at least before the world of business. No one can say he did not know it existed.

No one can say he is innocent of wrong. Because registration of these foolish things means notice of ownership to the world.

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

About Time—51—C—575,052
Barbara Gould, Inc., N. Y., N. Y.
Ser. March 8, 1949 D. U. Feb. 4, 1949

Airlite—51—I—589,033
John Hudson Moore, Inc., N. Y., N. Y.
Ser. Dec. 8, 1949 D. U. Nov. 17, 1949

"Amor Brujo"—51—BCDHE—581,837
Miguel Bienvenido Sorribes, Paris, Fr.
Ser. July 12, 1949 D. U. Dec. 30, 1948

Argentine—51—BC—575,328
Consolidated Cosmetics, Chicago, Ill.
Ser. March 12, 1949 D. U. Nov. 18, 1940

Barcelona—51—BC—575,329
Consolidated Cosmetics, Chicago, Ill.
Ser. March 12, 1949 D. U. Nov. 18, 1940

Bermuda—51—BC—575,330
Ser. March 12, 1949 D. U. Nov. 18, 1940
Consolidated Cosmetics, Chicago, Ill.

Blessed Relief—51—BC—592,194
Consolidated Cosmetics, Chicago, Ill.
Ser. Feb. 9, 1950 D. U. Jan. 25, 1950

Briefer—51—I—589,034
John Hudson Moore, Inc., N. Y., N. Y.
Ser. Dec. 8, 1949 D. U. Nov. 17, 1949

Caddy—51—I—506,168 (And Des.)
F. Hempel, assignor to Delfrie, Inc., N. Y., N. Y.
Ser. July 24, 1946 D. U. June 25, 1946

Camelia Penny's Round the Clock—51—C—520,858 (And des.)
Camelia Penny, Inc., Palm Beach, Fla.
Ser. April 17, 1947 D. U. May 15, 1946

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SYNTRON CO.
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Camelot—51—B—586,290
Lucien LeLong, Inc., Chicago, Ill.
Ser. Oct. 14, 1949 D. U. Sept. 12, 1949

Caper—52—A—561,678
Nopco Chemical Co., Harrison, N. Y.
Ser. July 19, 1948 D. U. May 5, 1948

Cemi-Curl—51—G—580,133
E. A. Gossaux, St. Louis, Mo.
Ser. June 8, 1949 D. U. Oct. 1948

Cigar's—51—ABCEHI—553,702
A. A. Y. Hermano, S. L. Cardenas, Cuba
Ser. April 2, 1948 D. U. Oct. 21, 1947

Dallenay—51—AI—559,646
Societe A Responsabilite Limitee Dallenay, Paris, France
Ser. June 18, 1948 D. U. Oct. 21, 1947

D'Orsay—51—ABCH—546,435
S. A. Compagnie Francaise Des Parfums D'Orsay, Puteaux, France
Ser. Jan. 7, 1948 D. U. Since 1908

Dream Stuff—51—C—575,411
The Andrew Jergens Co., Cincinnati, O.
Ser. March 14, 1949 D. U. Feb. 4, 1949

Exelento—52—A—586,238
Exelento Medicine Co., Atlanta, Ga.
Ser. Oct. 13, 1949 D. U. Nov. 11, 1912

Facade—51—BC—577,708 (And Des.)
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Ser. April 26, 1949 D. U. April 8, 1949

Fast Gloss—51—H—582,029
H. G. Douglas, DBA Belva Mfg. Co., St. Louis, Mo.
Ser. July 15, 1949 D. U. Jan. 1, 1932

First Lady—51—C—590,792
Arkwright, Inc., N. Y., N. Y.
Ser. Jan. 13, 1950 D. U. Jan. 1, 1930

Fleuroma—51—B—569,328
Fleuroma Inc., N. Y., N. Y.
Ser. Nov. 19, 1948 D. U. Feb. 11, 1946

Havana—51—BC—575,332
Consolidated Cosmetics, Chicago, Ill.
Ser. March 12, 1949 D. U. Nov. 18, 1940

Honolulu—51—BCHE—575,333
Consolidated Cosmetics, Chicago, Ill.
Ser. March 12, 1949 D. U. Oct. 1, 1936

Icy Rub—51—CHI—584,951
M. M. Fleron & Son, Inc., DBA Bercy's Labs., Trenton, N. J.
Ser. Aug. 22, 1949 D. U. June 1905

Lon-Lar—51—H—583,995
Garcelon & Larsen Mfg. Co., Napa, Calif.
Ser. Aug. 25, 1949 D. U. July 25, 1949

Nagon—51—H—573,218 (And Des.)
S. K. Uyeda DBA Uydea Trading Co., Los Angeles, Calif.
Ser. Feb. 2, 1949 D. U. March 1, 1941

Nassau—51—BC—575,334
Consolidated Cosmetics, Chicago, Ill.
Ser. Mar. 12, 1949 D. U. Mar. 19, 1937

Pam—51—B—590,253
Best's Apparel Inc., Seattle, Wash.
Ser. Jan. 3, 1950 D. U. Aug. 1, 1949

Pitter Patter—51—H—593,242
Rainwater, Inc., N. Y., N. Y.
Ser. March 1, 1950 D. U. Feb. 14, 1950

Poma-Tex—51—H—581,568
P. Secular, DBA Montru for Beauty, N. Y., N. Y.
Ser. July 6, 1949 D. U. Oct. 1, 1943

Prestige de Paris—51—B—576,990
Sauze, S. A. Colombes, France
Ser. April 12, 1949 D. U. Nov. 20, 1947

Pritti—51—CE—592,216
Ferd. Mulhens, Inc., N. Y., N. Y.
Ser. Feb. 9, 1950 D. U. Sept. 21, 1949

Progres—51—C—577,275
Lancome, S. A. DBA Lancome, Paris, Fr.
Ser. April 16, 1949 D. U. Jan. 15, 1942

Quest-E-Quecest—51—B—591,071
Compre', Inc., Cleveland, Ohio
Ser. Jan. 19, 1950 D. U. Oct. 15, 1949

Raid—51—K—572,207
W. J. Richards DBA W. J. Richards Pharmaceutical Specialties, Santa Monica, Calif.
Ser. Jan. 14, 1949 D. U. Nov. 12, 1948

Rio—51—BC—575,335
Consolidated Cosmetics, Chicago, Ill.
Ser. March 12, 1949 D. U. April 12, 1940

Sarno—51—CHS—532,262
Chas. F. Sarno, Phila., Pa.
Ser. April 7, 1949 D. U. March 11, 1949

Sportlite—51—I—589,035
John Hudson Moore, Inc., N. Y., N. Y.
Ser. Dec. 8, 1949 D. U. Nov. 17, 1949

Tabatchin—51—BCH—591,553
Benard & Honnorat, Grasse, France
Ser. Jan. 27, 1950 D. U. Oct. 1929

Thompson's—51—E—584,932
Thompson's Lab. of Kentucky, Inc., Louisville, Ky.
Ser. Sept. 16, 1949 D. U. Sept. 30, 1939

Thompson's Nail Culture—51—E—584,933
Thompson's Lab. of Kentucky, Inc., Louisville, Ky.
Ser. Sept. 16, 1949 D. U. May 31, 1949

"Touch and Glow"—51—C—584,417
Revlon Products Corp., N. Y., N. Y.
Ser. Sept. 2, 1949 D. U. Aug. 1, 1949

Vow—51—CH—591,278
R. J. Brown DBA Vow Labs., Asheville, N. C.
Ser. Jan. 23, 1950 D. U. Aug., 1948

WEC—51—K—576,385
C. B. Wright DBA Wec Products Co., Kansas City, Mo.
Ser. March 28, 1949 D. U. Jan. 29, 1949

Zacar's—51—B—592,319
W. Z. Hayman DBA Zacar's, Chicago, Ill.
Ser. Feb. 11, 1950 D. U. Dec. 15, 1949

There are no republished marks for the month of October.

Use of Gums in Cosmetic Preparations

(*Continued from page 775*)

characteristics from batch to batch and not difficult to process. The introduction of carboxy methyl cellulose made a deeper impression since this material did not suffer from the difficulties arising from temperature variations. Carboxy methyl cellulose is perhaps the best suspending agent of the synthetic gums. It is currently being used in conjunction with synthetic detergents to prevent redeposition of soil on cotton fabrics during washing, which, until its introduction, was the primary defect in synthetic detergents as compared to soaps. Its abilities as a suspending agent are rapidly being utilized in cosmetic emulsions and dentifrices as well.

Carboxy methyl cellulose however is anion active and therefore incapable of use in conjunction with cationic active materials such as quaternary ammonium compounds. Since this type of emulsion is rapidly increasing in popularity it might perhaps be pertinent to talk about their peculiarities. None of the natural gums can be used in conjunction with them, but since methyl cellulose is non ionic in character it may be used without any fear of an incompatibility. Hydroxy methyl cellulose, also non ionic, would probably do as well.

(*Continued on page 846*)

Management Forum

(*Continued from page 817*)

The rotary head is driven by heat treated, ground, worm and worm gear completely enclosed in a housing and running in oil and a helical pinion. The use of a high speed drive counter shaft, mounted on ball bearings, eliminates the need for an extra weight flywheel, further reduces power consumption, and permits the use of a standard 2 HP—1800 RPM motor. The head and vertical drive shaft are mounted on Timken roller bearings for low friction and accurate location.

Ready access to all working parts is provided. The main drive shaft is located off the center line of the vertical axis of the base and below the machine head. The center of gravity is low and the rotary head is completely guarded because no opening for head drive is necessary. Thus, tablet material cannot sift down into the drive mechanism. Punches are completely shielded against dust by an easily removable cover.

The second new unit is the Colton No. 233 Double Rotary Tablet Press which has a maximum output of 1930 tablets a minute with a maximum tablet diameter of 7/16" and maximum cell depth of ¾". This unit has 33 punches and dies. In all other details it is like the No. 227.

Both machines occupy floor space of 59" wide x 32" deep, 66" high, and weigh 2175 pounds.

"Myvax"

a trade-mark to remember

IN 1948, DPi introduced the first synthetic vitamin A available in commercial quantity on the American market. Since then, it has been in continuous successful production under the trade-mark "Myvax."

It is available in two forms—Myvax 16 Synthetic Vitamin A Palmitate and Myvax Synthetic Vitamin A Acetate. Both have pleasant but exceedingly faint taste and odor.

Palmitate—ideal for aqueous multi-vitamin dispersions because of its stability in the presence of polar substances. Used in tablets and dry-filled capsules, its high-standard potency of 1,000,000 U.S.P. XIV Units per gram reduces the amount of liquid oil that must be taken up by the solids.

Acetate—offered for highest commercially practical potency—up to 1,500,000 U.S.P. XIV Units per gram. Recommended for use in oil solutions only. Its stability to oxidation equals that of the palmitate.

And don't forget—DPi also offers Distilled Vitamin A Esters, the most uniform, bland, and stable of the natural concentrates.

For the latest quotations on natural or synthetic vitamin A or natural vitamin E—write, wire, or call ***Distillation Products Industries,*** 791 Ridge Road West, Rochester 3, N. Y. (Division of Eastman Kodak Company). Sales Offices: 570 Lexington Ave., New York 22, N. Y. • 135 South LaSalle St., Chicago 3, Ill. • Gillies & Loughlin, Los Angeles and San Francisco • Charles Albert Smith, Ltd., Montreal and Toronto.

leaders in research and production of vitamin A and vitamin E

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READERS' QUESTIONS

CREAM RINSES: We would appreciate your help on a method for making cream rinses. We have made a preliminary search of some of the standard references, but, as yet, we have found little information on cream rinses. Denver.

A preparation of this sort can be made along the following lines:

Quaternary ammonium compounds	**4.0**
Glyceryl monostearate	**3.0**
Water, to make	**100.0**

With some quaternary ammonium compounds higher proportions may be required. Other opacifiers, like diglycol laurate, may also be used and sometimes smaller quantities may be employed.

ANTI-ACNE OINTMENT: I have been trying to improve the properties of a polysulfide anti-acne ointment. My main purpose is to try to improve the odor, which is most unpleasant. Can you suggest what type of perfume will help to cover this unpleasant odor? Madison.

Unfortunately, with respect to smell, the efficiency of most such preparations depends upon the deposition of fine particles of sulphur and this is often best achieved through the use of products containing sulfides which are, as you know, quite malodorous. I would suggest that you contact perfuming specialists such as those who advertise in our publication.

You may be interested in the following preparation which was suggested by J. G. Downing, and his associates several years ago as a means of providing an improved type of sulphur lotion.

Precipitates sulfur	**10.0 Gm.**
Spirit of camphor	**10.0 cc.**
Alcohol	**80.0 cc.**
Solution of methyl cellulose, 2%	**30.0 cc.**
Rose water, to make	**240.0 cc.**

If you would like to work with an improved ointment base, I would suggest the following non-greasy, easy-to-use preparation, also suggested by these workers:

Sodium lauryl sulfate	**0.8 Gm.**
Cetyl alcohol	**15.0 Gm.**
Glycerine	**5.0 cc.**
White petrolatum	**14.0 Gm.**
Water	**35.0 cc.**

The precipitated sulfur is readily incorporated in this base and the addition of a perfume oil, like oil rose, helps to disguise the distasteful sulfur odor.

CREAM SHAMPOO CONCENTRATE: I am interested in a cream shampoo concentrate to be made with one of the newer type wetting agents and detergents. The product is to be diluted with water to yield a nice cream shampoo. Syracuse.

It has seemed to me that a product of this sort could be made by combining a synthetic detergent such as sodium lauryl sulfate paste with sodium stearate in a ratio of about six to one. This can be modified in many ways and the preparation adjusted as required. If you wish, up to about one per cent of lanolin or some other conditioner may be included.

SOLID PERFUMES: Will you be so kind as to send me a modern formula for making a solid perfume? Fort Myers.

I should like to point out that a comprehensive discussion on the manufacture of such products, prepared by Harry Hilfer, appeared in the May 1950 issue, page 523 of our magazine. I am quite sure you will find all the necessary information in this up-to-date review.

NON-SMEAR NAIL POLISH REMOVER: Can you please give us a formula for a "non-smear" nail polish remover. Chicago.

I assume that you mean a nail polish remover in cream or gel form. A product of this sort can be made by mixing butyl acetate and similar solvents with a little soap to get the desired stiffness. This may be packed in jars or tubes. Acetone may be included if the product is to be packed in tubes but otherwise it is too volatile for an open container. I would also suggest that you check U. S. Patent 2,393,864 in which polyethylene glycols are used to impart a cream-like consistency to the product.

TABLET PROBLEM: We would appreciate any information that you might have on the processing of a coated tablet of ferrous sulfate exsiccated with ascorbic acid, with reference to preventing the incompatibility of ferrous sulfate exsiccated and the ascorbic acid. Philadelphia.

I recall that some organization overcame the incompatibility problem by incorporating the ingredients in the tablet in layers, the layers being separated by suitable films or coatings.

COMPOUNDER'S CORNER

Data on Sodium Cellulose Sulfate

A booklet describing the new water soluble cellulosic, sodium cellulose sulfate, has just been released by Tennessee Eastman Corporation of Kingsport, Tennessee. The booklet contains information relative to physical properties, toxicity, stability, compatability and suggested uses. Called SCS, this new cellulose is made by treating cellulose fibers, such as wood pulp or cotton linters with sulfuric acid and certain other reagents. The resulting granular product can readily be dissolved in hot or cold water. As SCS is added to water, the viscosity of the solution increases rapidly. A solution containing only 2 to 3 per cent of SCS is so thick and syrupy that it can hardly be poured from its container. If such a solution is distributed evenly over a smooth plate and the water present removed by evaporation, a clear, strong, greaseproof, non-burning film is produced. These properties indicate that this new cellulose gum will be useful in a number of fields. In the drug and cosmetics field SCS may find use in the preparation of greaseless creams, lotions, salves and ointments. Water soluble capsules might well be made from SCS films for use as individual packages to contain products such as soap powders, bath salts and the like.

Colorado Shale Oil in Dermatology

The possibility that Colorado shale oil may be useful in dermatotogical therapy is indicated in the preliminary report of R. Brandt and H. Dexter (*J. Investig. Dermat.* 15:163, 1950). They say that for a number of years, shale oil derivatives, mostly obtained from Seefeld in Tyrol, have been used extensively, especially in Europe. There are no reports in the medical literature on American shale oil. Not much is known about the relative therapeutic effects of shale oils of different origin, but because of the pronounced differences in their physical and carcinogenic properties, considerable variation may be presumed to exist.

Because of favorable experience with Tyrolean shale oil, it was decided to determine the efficiency of Colorado's product. Skin tests of the crude oil for primary irritation were negative in all fifty trials; no immediate or delayed reaction being noted in any case. Next, therapeutic use of the crude oil was begun. All the patients were treated with 50 per cent or 25 per cent preparations in either Aquaphor or zinc-talc lotion. Preliminary studies were limited to cases of eczema and psoriasis; in the former group, the crude oil was used in the more drying base, in the latter, in the more greasy. The 25 per cent concentration was used on the scalp and in the uncommon cases where subjective sensations of irritation were noted. Almost all of the patients have shown gratifying reponse. Results were from "good" to "excellent" and, with only one exception, were better than those obtained with other medicaments.

Simplified Glycerinated Gelatin Production

The problem of dissolving gelatin in large amounts in polyhydric alcohols like glycerine has always been a troublesome one, say L. F. Tice and A. W. Moore (*J. A. Ph. A*, Pract. Ed. 11:565, 1950). Their study of the situation revealed that the U. S. P. technique for preparing the official Glycerinated Gelatine is faulty and fails to take into consideration the high purity of present-day gelatin. Following studies to improve the mixing of the two ingredients, they developed a system by which the glycerine is drawn through the gelatin with the aid of suction.

One simple modification of this method requires that cotton be placed in the tip of a funnel. The granulated gelatin is now packed in the funnel and the glycerine is caused to sink through it by connecting a vacuum line to the tip of the funnel. When the gelatin is wetted, the vacuum is disconnected, the cotton removed, the funnel placed in the neck of a bottle and both are placed in an oven. After a few hours the melted glycerinated gelatin will be in the bottle. Tice and Moore feel that it would seem a simple matter to design large-scale equipment using a steam-jacketed funnel and receiver.

Since the U.S.P. solution of gelatin is glycerine, as made by this improved method, is far too firm for general use, it is proposed that a 45:55 ratio of gelatin and glycerine be used when the newer process is employed. Such a product possesses the proper characteristics desired in glycerinated gelatin and it can be readily melted and poured. Other improved methods of preparing concentrated solutions of gelatin in glycerine, with or without water, are given. These methods may also be used to prepare solutions of gelatin in propylene glycol.

Aureotracin

As noted by H. Welch, W. A. Randall and C. W. Price (*J. A. Ph. A.*, Scient. Ed. 39:483, 1950), aureomycin and bacitracin are both valuable antibiotics. During some experimental work on the synergistic action of antibacterial agents, they noted that combinations of dilute solutions of the two antibiotics remained clear, but when more concentrated solutions were mixed in aqueous solution, a dense golden yellow precipitate formed rapidly. Collection of this precipitate and injection into experimentally infected animals showed that the antibacterial activity of both antibiotics was retained. With the possibility that a new compound had been formed by the mixture of these two drugs under the above conditions, a small lot of the material was prepared for further study. The following procedure was used: A total of 3.75 Gm. of bacitracin (166,000 units) dissolved in 37.5 ml. of water was mixed with 0.2 Gm. aureomycin previously dissolved in 20 ml. of water. The precipitate was collected, washed with water, frozen, and dried. A golden yellow powder resulted which was insoluble in water and ordinary organic solvents but quite soluble in dilute alkalies and acids. The substance, which has been designated aureotracin, is less nephrotoxic than one would expect from its bacitracin content, has activity against all the organisms ordinarily affected by aureomycin and bacitracin, affords prolonged blood concentration when injected into the animal body, and can be used with safety in man.

The chemical nature of aureotracin is not known although infrared spectrum analysis shows many points in common with aureomycin and bacitracin. The changes in physical characteristics, considered in conjunction with the lowered toxicity to animals, indicate that a substance different from the parent compounds has been formed.

Thioglycollate Depilatory

In British patent 636,181, R. L. Demuth described depilitories of the kind in which the lower mercapto carboxylic acids, such as thioglycollic acid, are used as active principles. The essential feature of the new products is the molecular neutralization of the mercapto carboxylic acid with an alkaline earth compound, like calcium hydroxde, or with an organic base, such as guanidine. By such means, he claims, it is possible to produce effective, pleasant, easy to apply, non-sticky depilatories. Several examples of such preparations are given, such as the two given below:

1	
Guanidine thioglycollate	**26 parts**
Guanidine	**4 "**
Polymerized polyglycol ester	**1 "**
Cellulose glycollic acid (5%)	**69 "**

2	
Calcium thioglycollate	**4.5 parts**
Guanidine	**7.0 "**
n-Propenyl Allophanate	**5.5 "**
Sorbitan monostearate	**4.0 "**
Sorbitan sesquioleate	**1.0 "**
Polyoxyalkylene sorbitan monostearate	**2.0 "**
Beeswax	**9.0 "**
Spermaceti	**2.0 "**
Liquid paraffin	**37.0 "**
Water	**28.0 "**

Metallic Soaps in Face Powders

In a concise discussion of the role of metallic soaps in face powders, appearing in *Schimmel Briefs* for October, 1950, it is pointed out that the addition of zinc or magnesium stearate to a powder containing more dense materials such as precipitated chalk makes the powder lighter and fluffier. The stearates have considerable covering power in themselves and thus enhance the covering power of the other ingredients by making the particles cling more tightly to the skin. Zinc and magnesium stearates have decided water repellent properties and give increased moisture resistance to face powders. The presence of stearates in the powder film retards the wetting of the film by perspiration so that the cosmetic effect of the powder is more lasting. The zinc soap is also a mild antiseptic and may contribute to maintenance of the skin in a healthy condition.

The proportion of zinc or magnesium stearate used in a face powder may vary from 5 per cent to 20 per cent. The formulas given below will indicate some of the more common inorganic constituents of face powders, of which innumerable combinations are possible.

	1.	2.
Zinc stearate	**20.0**	**4.0**
Zinc oxide	**10.0**	**15.0**
Talc	**60.0**	**80.0**
Magnesium carbonate	**10.0**	**1.0**
Color and Perfume		

	3.	4.
Talc	**40.0**	**15.0**
Colloidal clay	**45.0**	**25.0**
Titanium dioxide	**4.0**	**5.0**
Magnesium stearate	**6.0**	**10.0**
Magnesium carbonate	**5.0**	..
Precipitated chalk	..	**45.0**
Color and Perfume		

Treatment of Excessive Perspiration

In a discussion of the treatment of excessive perspiration, appearing in *Parfumerie und Kosmetik* (31:20, 1950), the following compounds, in the percentages given, are recommended for the external treatment of this condition: 1 to 3 per cent of salicylic acid, 0.002 per cent of potassium permanganate, 1 to 2 per cent of boric acid, and 1 per cent of hydrogen peroxide. Formalin, chromic acid and alum should be avoided because of their hardening affects on the epithelium and gradual damaging of the sweat glands. Several formulas for typical European antiperspirants are presented. One of the simplest is a 4 per cent solution of aluminum acetotartrate in rose water. Another preparation calls for the use of:

Aluminum chloride	**10.0 parts**
Hydrochloric acid	**1.0 "**
Rose water	**90.0 "**

Somewhat more complex is a lotion made from:

Lavender water	**34.0 parts**
Alcohol	**40.0 "**
Glycerine	**15.0 "**
Benzoic acid	**3.5 "**
Salicylic acid	**2.5 "**
Tincture of benzoin	**5.0 "**

A cream may be made from:

Glyceryl Monostearate	**18.0 parts**
Triethanolamine Stearate	**1.0 "**
Glycerine	**8.0 "**
Cetyl Alcohol	**1.5 "**
Liquid petrolatum	**1.5 "**
Titanium dioxide	**1.0 "**
Hexamethylene tetramine	**5.0 "**
Distilled water	**64.0 "**

It is noted, however, that really efficient treatment of excessive perspiration must be based on a reduced fluid intake as well as an improved circulation. Attention is called to the use of sage preparations, e.g. powdered leaves, oil or infusion, in the internal treatment of the condition. Described as a harmless and pleasant method, the use of sage is said to be capable of causing a 50 per cent decrease in the loss of water through the skin. Sage, it is noted, is being used to check perspiration during puberty and in cases of tuberculosis.

Value of Zinc Oxide

After considering the abstract on titanium dioxide appearing in the September, 1950 issue of this publication, one corespondent points out that experienced cosmetic formulators know that the relative covering power of pigments is not a constant factor but varies with the medium in which they are incorporated. In face powders, for example, the ratio between any two pigments is closer than in creams. This is because the refractive index of air is lower than that of other media, such as water or oils. He notes that, according to one authority, the relative covering power of titanium dioxide and zinc oxide ranges from 1.66 to 2.92, depending on the medium. As a result, the relative economy of these two pigments also changes with the medium. At current prices it so happens that U. S. P. zinc oxide provides more covering per dollar in face powders than does cosmetic grade titanium dioxide.

This correspondent, an expert on this subject, also states that cosmetic chemists in this country formulate zinc oxide into their products not only for its whiteness and covering power, but also for the many special properties that it imparts. These include superior adherence, fluffiness, opacity to sunburn rays, bacteriostatic action, mild astringency, deodorization by neutralizing perspiration, together with soothing and protective properties. It is interesting to recall in this connection that pharmaceutical chemists employ U. S. P. zinc oxide for many of these properties in a variety of products, such as calamine lotions and zinc ointments.

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by Terkelsen

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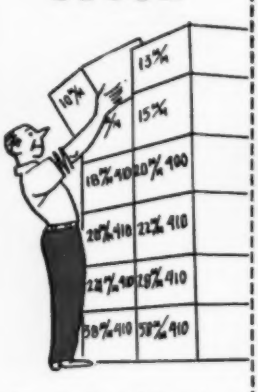

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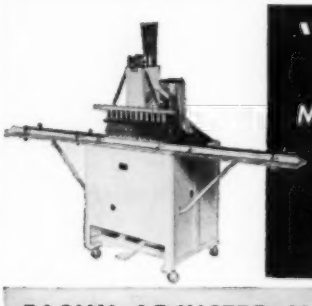

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ADVANCING THERAPY

Vitamin A Absorption

Information on the absorption of vitamin A is provided in the report of E. F. Week and F. J. Sevigne (*J. Nutrition* 40:563, 1950). Their study on 18 men and seven women showedvariations in utilization of vitamin A, depending on its chemical form and on sex. The subjects were given 134,000 micrograms of vitamin A in margarine at breakfast in the form of the alcohol, the acetate, or as one of two natural esters. Blood samples were drawn before administration of the vitamin and after 2, 4, 5, 6, 8 and 24 hours. In the men, the serum level of vitamin A was highest at all intervals after they had consumed the vitamin A alcohol, next after the acetate and somewhat lower after the natural esters. A given dose of the vitamin gave uniformly lower serum levels in the women; here again the acetate was lower than the alcohol form, but, in contrast to results in the men, the natural esters showed as high a serum level as the alcohol form. In all cases, the vitamin A was present in the serum in the ester form irrespective of the form administered and the greatest concentration in the blood was observed between the fourth and fifth hours.

Radioactive Adrenaline

Radioactive adrenaline has been synthesized and is now being employed to study the effects of this drug in the body, according to the report of R. W. Schayer to the 118th meeting of the American Chemical Society. Adrenaline increases blood pressure, stimulates the heart, and is involved in the transmission of nerve impulses in a part of the involuntary nervous system, so that a thorough knowledge of the drug's fate in the body is of obvious importance. Many investigations along this line have been undertaken in the past, using non-radioactive adrenaline, but much greater progress is to be expected now that the radioactively tagged compound is available.

Schayer explained that the advantages of radioactive adrenaline for research purposes are that it permits the use of very small quantities of the drug, it makes possible the detection of the radioactive part of the drug regardless of changes effected by the body, and it lends itself to the detection and identification of excretory products.

The purposes of the research specifically reported in Schayer's paper on the "Synthesis and Metabolism of Radioactive Adrenaline" were to study the distribution of the radioactivity in the body at various intervals after injection of radioactive adrenaline, and to investigate the number and nature of the substances to which the body converts adrenaline. It was found that the radioactivity rapidly left the blood stream and was absorbed by the body tissues in general. After about three hours, significant amounts of radioactivity appeared in the blood. This rose to a maximum in about six hours after injection and then fell off rapidly. During the interval of from three to seven and one-half hours after injection, large amounts of radioactivity were found in the liver and kidney as excretion proceeded. After nine hours most of the injected radioactivity was found in the urine.

A possible interpretation of these findings is that adrenaline is removed from the blood by the body tissues, where it is converted into one or more new substances differing in properties from the original adrenaline. The new substances are then released from the tissues back into the blood stream, from which they are picked up by the liver and kidney for possible further change and excretion. Already evidence indicating that adrenaline is converted into at least five substances in the body has been obtained with the aid of the radioactive drug, which contains radioactive carbon.

Choline for Arteriosclerosis

L. M. Morrison and W. F. Gonzalez (*Am. Heart J.* 39:729, 1950) used choline, a lipotropic agent and a member of the vitamin B complex, in the treatment of coronary arteriosclerosis. The drug was given to 115 patients with this condition; alternate unselected patients served as controls and were not given choline. The average dose for most patients was 12 Gm. daily. The choline treatment was continued for one year by 52 subjects, for two years by 35 subjects and for three years by 28 subjects. At the end of the three year period 14 of the 115 patients who had been treated with choline and 35 of the 115 who had not received choline were dead. Thus the subsequent mortality rate of patients who had suffered an acute coronary thromboses with myocardial infarction appeared to be significantly reduced by treatment with choline. These studies suggest that the lipotropic agent choline is of value in the treatment of coronary arteriosclerosis.

Antibiotics Hasten Growth

New evidence of significant nutritional powers possessed by antibiotic drugs was reported at the American Chemical Society's 118th national meeting when J. R. Stern and J. McGinnis described recent growth-promotion experiments with aureomycin, streptomycin, and terramycin. In a series of animal tests which definitely showed that these antibiotics "do something to make young rats grow faster," it also was found that the drugs have a beneficial effect on female rats while they are nursing their young.

Just how the antibiotics work is not entirely clear. The antibiotics appear to have their growth-promoting action by influencing these bacteria which live in the intestines. There are two theories regarding the course of action of the antibiotics: they decrease the numbers of the harmful bacteria, thereby making the host animals somewhat healthier and able to grow faster, or they decrease the number of the indifferent bacteria, and this allows more of the bacteria which form food products to grow. These bacteria then produce more of the materials needed by the rat, which is thereby able to grow faster.

The antibiotics also had a beneficial effect on female rats while they were nursing their young. It is particularly interesting that weaning rats whose mothers were fed antibiotics were heavier than those whose mothers did not receive the antibiotics. Young rats eat very little before they are weaned. It is therefore most likely that the greater weight of the young from

females fed antibiotics was caused by the milk that they received. It is not known whether the milk was of better quality or whether more milk was available to the young while they were nursing. It was also shown that feeding antibiotics at a low level to the rats for a long period of time produced no harmful effects that could easily be seen. This indicates that it would be safe to feed the antibiotics to farm animals to produce faster growth in the young. It may even be found desirable to feed antibotic concentrates to physically retarded children in order to increase their growth rate.

Choice of Sulfa Mixtures

In considering the choice of sulfonamides for mixture therapy, D. Lehr (*Brit. Med. J.* 2:601, 1950) points out that the simultaneous administration of several sulfonamides in *partial* dosage may result in a reduced rather than an increased incidence of sensitization, because mixtures permit "dilution" of individual drug concentrations below the level necessary for the production of allergy. Hence it is possible to enhance the renal protection afforded by sulfonamide mixtures by using additional components in proportionately smaller amounts, without the danger of increasing the incidence of allergic reactions.

Sulfadiazine and sulfamerazine qualify for first and second place, respectively, as mixture components. Sulfathiazole, sulfapyrazine, sulfamezathine, and sulfacetamide deserve attention as possible third and fourth members of a combination. Although sulfathiazole has fallen into disfavor in the U. S. A. because of its high clinical toxicity, mixtures containing this drug have shown a low over-all toxicity. Sulfapyrazine, the most insoluble of these compounds, induces frequent renal and allergic reactions and therefore offers no advantages over sulfathiazole. Sulfamezathine has adequate solubility and low toxicity, but is subject to substantial conjugation and plasma-binding, which diminish its therapeutic efficiency. Sulfacetamide retains the high solubility of sulfanilamide and shares with the parent compound the improbability of renal concretion formation and the ready diffusibility into all tissues. In addition, it shows low figures for conjugation, plasma-binding, and sensitization.

The mixture sulfadiazine-sulfamerazine-sulfacetamide (equal amounts) revealed low toxicity in animals as well as excellent bacteriostatic activity *in vitro* and in experimental infections of mice. After oral administration, blood and spinal-fluid levels were similar to those from equal doses of sulfadiazine or sulfamerazine. Clinical trials of this mixture in 170 patients with acute systemic infections showed a high curative value and low toxicology.

Chelating Agents vs Urinary Calculi

B. Kissin and S. Natelson (*Science* 112:367, 1950) report preliminary experiments with chelating agents, such as ethylenediamine tetraacetic acid ("Sequestrene," Alrose Chemical Co., Providence, R. I.) and allied substances, which indicate a definite applicability to clinical problems. For example, *in vitro* experiments have been made in which the effectiveness of the chelating agent was compared with Suby's solution G for dissolving various urinary calcium calculi. The chelating agent was found to be consistently much more effective with all types of stones tested, including calcium oxalate, calcium phosphate and calcium carbonate. However, when used to irrigate the bladder, it was found to be fairly irritating. Whether this is due to be fairly irritating. Whether, this is due to the removal of the calcium ion or to impurities in the product is still to be determined.

In other studies, the compound was injected intravenously in rabbits as a treatment for acute lead poisoning. The early results, it is reported, appear promising.

Water Fluoridation and Caries Control

Further evidence of the value of fluoridation of public water supplies for the mass control of dental caries is offered in the controlled studies of H. T. Dean, F. A. Arnold, Jr., P. Jay and J. W. Knutson (*Public Health Repts.* 65:1403, 1950. In their investigation, fluoridation of the Grand Rapids (Mich.) public water supply began in January 1945. Analysis of the 1949 dental examinations at Grand Rapids shows a reduced amount of dental caries experience when compared with the pre-fluoridation rates of 1944-45. The findings indicate that the reduction is most pronounced in the younger age groups whose dentition was largely calcified following the addition of one part per million of fluoride (F) to the previously fluoride-free public water supply. Sufficient time has not elapsed to evaluate water fluoridation in the older age groups.

Of pertinent interest are the experimental studies made by J. C. Muhler and H. G. Day (*J. Am. Dent. Assoc.* 41:529, 1950) on the effects of stannous fluoride, stannous chloride and sodium fluoride on the incidence of dental lesions in rats fed a caries-producing diet. They found that stannous fluoride in the concentration of ten parts of fluorine per million in the drinking water was greatly superior to sodium fluoride or stannous chloride in any concentration used in this experiment for reducing the incidence and severity of carious lesions in both strains of rats. Stannous chloride did not appear to decrease significantly the incidence of dental caries. Sodium fluoride in the concentrations of 10 ppm of fluorine in the drinking water had some preventive effect on the incidence and severity of the carious lesions. Neither the stannous salts nor the sodium fluoride had any apparent toxic effects in the concentrations used.

Cortisone and Other Steroids

In the studies conducted by a team of British investigators headed by W. S. C. Copeman (*Brit. Med. J.* 2:849, 1950), 40 patients suffering from rheumatoid arthritis have been submitted to clinical trials with cortisone and five other steroid compounds. The following criteria were used to assess the effects of these compounds: (1) Recorded interviews before, during, and after treatment. (2) Filming of certain movements in selected cases. (3) Assessment of joint tenderness and range of movement. (4) Functional tests such as walking, climbing steps, putting on a coat, and mounting a chair. (5) Personal assessment of improvement by the patient. (6) Eosinophil counts, erythrocyte sedimentation rate, and haemoglobin determination. (7) Urinary 17-ketosteroid, pregnanediol, and "corticoid" estimations.

Cortisone was used in five cases, with cholesterol as a control substance. Although it was not known at the time of administration which compound was being used, the dramatic clinical effects of cortisone were immediately obvious. The other steroid compounds employed were androstenedione, dehydro-*iso*-androsterone, progesterone, pregnenolone, and pregnadienolone. These proved ineffective, except in one case treated with progesterone in which there was a remission of sysmptoms, which was not repeated when a second course was administered.

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INDUSTRY'S BOOKS

Modern Practice in Dermatology, Edited by G. B. Mitchell-Heggs, O.B.E., M.D., F.R.C.P., Physician-In-Charge, Skin Department, St. Mary's Hospital and Medical School, London, 836 pp., Illus., Paul B. Hoeber, Inc., New York, $12.50.

This volume is essentially a symposium by a number of authors of experience from teaching schools throughout the British Commonwealth. The varied styles and modes of presentation make the reading easy and interesting. The book is designed to help general practitioners, members of the Armed Forces and Government Services, and medical advisors to commercial organizations with international work, throughout the world. Conditions which are common problems in general practice, industry and public health, including those with a "nuisance" rather than a "disablement" value, have been described in full. Time is so previous in general practice that any spent searching for information can be ill spared. In view of this, apart from the help of a thorough index, readers will find a practical grouping of disorders, not only into chapters based on a common cause but also into those based on particular regions of the body. The realization of what is common and what is rare is difficult for medical students. Repetition helps the memory, and those who read the book straight through will find that subjects of practical importance have, in fact, been described more than once, and from more than one point of view, and in this way the common disorders are stressed. The importance of insect life in Medicine in these days of rapid air and surface travel, is sometimes overlooked, as is the influence of changes of climate, new processes in industry and the mental stress of modern civilization. Again, the value of histological investigation in understanding the pathology of certain disorders of the skin should be realized. All these have been given adequate attention. This work as a whole has been adequately planned to help in the diagnosis and treatment of disorders of the skin commonly met with during the ordinary course of general practice.

Colloid Chemistry, Theoretical and Applied, by Selected International Contributors, collected and edited by Jerome Alexander, Volume VII, 736 pp., Reinhold Publishing Corp., New York, $15.

This meaty book provides a wealth of important material for all physical chemists, biochemists and physiological chemists, as well as manufacturers and chemical engineers. As with previous volumes in this series, Jerome Alexander has combed the world for outstanding contributors to this important work which combines theoretical considerations with the more practical industrial applications of this huge field. Volume VII consists of 43 papers, each complete in itself. They form part of the larger picture of natural phenomena. Part I—Theory and Methods—covers the basic structure and behavior of matter at various structural levels. A feature of this section is a challenging article by W. D. Harkins on the nuclear reactions involved in the hydrogen bomb. Part II—Biology and Medicine—covers proteins, enzymes, drugs, genetics, tuberculosis, blood types and dental caries. Part III—Technological Applications—includes the newly developed sonic agglomeration process, soils, oil-well treatment, catalytic cracking, asphalt, detergents, cosmetics, textile fibers, wood, cellophane, packaging, freezedrying, margarine, chemical warfare, photosensitive glass, etc.

Peptic Ulcer, by A. C. Ivy, Ph.D., M.D., D.Sc., LL.D., Vice-President of the University of Illinois in Charge of Chicago Professional Colleges; M. I. Grossman, Ph.D., M.D., Associate Professor of Physiology, University of Illinois, College of Medicine; and William H. Bachrach, Ph.D., M.D., Research Associate in Physiology, University of Southern California, School of Medicine, 137 Illustrations; 210 Tables, 1,144 Pages, The Blakiston Co., Phila., $14.00.

This is a one-volume library on peptic ulcer containing a complete and analytical condensation of the world's opinions on the subject. It is an exhaustive review of the definition, pathogenesis, diagnosis and treatment of peptic ulcer based on experimental and clinical data. It brings together and interprets the significant contributions on the broad subject of gastric physiology and peptic ulcer. The various medical and surgical therapies are discussed in detail including why they have been and are employed. Each of the 21 chapters is concluded with a summary and each of the four parts is concluded with a summarizing chapter. The general practitioner is thereby able to get a quick over-all view of the particular subject in which he is interested, and then read further if he so desires. Contents: Part I—Introduction to the Problem of Peptic Ulcer. Part II—On the Pathogenesis of Peptic Ulcer. Part III—The Diagnostic Problem. Part IV—The Treatment of Peptic Ulcer.

The Biochemistry of B Vitamins, by Roger J. Williams, Robert E. Eakin, Ernest Beerstecher, Jr., and William Shive, University of Texas, 741 pp., Reinhold Publishing Corp., N. Y., $10.

The purpose of this outstanding treatise by leaders in the field is to furnish a well digested, critical survey of the progress of research on the biochemistry of B complex vitamins. The primary aim of the authors has been to present constructive and suggestive viewpoints so that the reader could benefit from a full discussion of the pros and cons involved in this fast moving branch of science. All four authors are actively engaged in research or teaching programs involving vitamins and have themselves played a leading part in such recent developments as the theory of structural analogs and antagonistic substances (anti-metabolites). The material is presented in readable form, intelligible to those whose activities may be along a wholly different line so they may gain perspective, interest and appreciation of the fundamental unity existing in the broad area involving physical as well as biological science. This book will be of vital interest to medical specialists, biochemists, nutritionists, physiological chemists, pharmacologists and food technologists. This is Vol. 110 in the American Chemical Society Monograph Series.

(Continued on page 858)

PERFUMER'S SHELF

Contact Dermatitis from Cinnamon

In the *Ohio State Medical Journal* (46:659, 1950), F. W. Epstein gives details on one of his cases, a woman, aged 59 years, who worked as a baker. She had a severe erythematopapular eruption of both hands. The fingers were swollen. Intermingled with acute vesicular lesions were chronic lichenified areas on the dorsum of both hands. The dermatitis was extremely pruritic and involved both wrists and forearms. The palmar aspects of the hands were also involved but to a lesser extent than their dorsal aspects. History revealed a chronic dermatitis of the dry eczema type of the hands for two years, with frequent remissions and exacerbations, the latter definitely tied up with longer hours at work and holiday baking. Patch tests with various substances revealed a hypersensitivity to cinnamon, although the ingestion of cinnamon caused no local or systemic reactions. Removal of the source of irritation was followed by recovery.

Oil of Blumea Lacera

In reporting on the essential oil from the leaves of *Blumea lacera*, K. K. Baslas and S. S. Deshapande (*J. Indian Chem. Soc.* 27:28, 1950) stated that this material consisted of 66 per cent cineol, 10 per cent *d*-fenchone and about 6 per cent citral. The oil was obtained by steam distillation of the leaves in .05 per cent yield and had the following properties:

Specific gravity	**0.982**
Index of refraction	**1.490**
Specific rotation	**31.6°**

The steam distillate was extracted with carbon tetrachloride, dried, the solvent removed, and fractionated into three portions. Fraction 1 was very odorous, boiled at 178°C., absorbed bromine, and gave no reaction with nitrosyl chloride, Fehling solution, ammoniacal silver nitrate, or semicarbazide. This fraction was cineol as shown by the formation of a solid addition compound with syrupy phosphoric acid, and a crystalline derivative with resorcinol, melting at 87 to 90°C. after two crystallizations, which again liberated cineol on warming with aqueous sodium hydroxide. Fraction 2 was redistilled and analysis indicated the formula to be $C_{10}H_{16}O$. This fraction did not reduce Fehling solution or ammoniacal silver nitrate and had no characteristic hydroxyl group. It formed an oxime, melting at 163°C.; the semicarbazone melting at 186 to 187°C. on crystallization. Comparison with a known sample indicated *d*-fenchone. Fraction 3 was unstable when distilled at atmospheric temperature and tended to polymerize. This fraction reduced Fehling solution, formed an addition product with sodium bisulfite and gave a semicarbazone, melting at 163°, indicating citral.

Production of Anisole

According to British patent 635,853, granted to E. I. DuPont de Nemours & Co., anisole is prepared from phenol and methyl ether in the vapor phase in the presence of a dehydrating catalyst. For example, a mixture of 54 parts of phenol and 68 parts of methyl ether per minute was passed continuously into a tube containing 3,880 parts of an activated alumina catalyst of 8 to 14 mesh at 345 to 355°C. The anisole recovered by distillation after two hours amounted to 2,180 parts. It boiled at 154 to 155°C. and had a specific rotation of 1.5150. Unreacted methyl ether may be separated continuously and recycled together with phenol and methanol under similar conditions to give pure anisole.

Studies on Lemon Grass Oil

A study of the correlation of the extent of antioxidation of lemon grass oil and loss of germicidal activity was carried out by S. M. Bose, C. N. Bhima Rao and V. Subrahmanyan (*J. Sci. Ind. Research* 9B:37, 1950) over a period of 24 months, and a comparison was made of the effect of various antioxidants, alone or in combination, on this decomposition. Results were reported in terms of a "protection factor," the best results being given by phenolic types of antioxidants, the least by acid types. Synergistic action with mixtures of antioxidants with high protection factors were also studied. It was reported that practical application of the best agent, pyrogallol, is limited by its toxicity. However, ethyl or propyl gallate with citric or tartaric acid gave optimum protection.

Dyeing and Perfuming Bath Crystals

In discussing methods for expediting the production of finished bath crystals from either borax or soda, A. G. Arend (*Perf. & Essent. Oil. Rec.* 41:93, 1950) cites a method that has proved very successful for the quick drying of the crystals. This method is based on a modification of the airduct system, where the passage of air through separate ducts permitted the crystals to be continuously dried without breakage. Formerly this was only possible with powdered or granular materials, where loss through breakage was not considered important. A somewhat similar principle has already been tried out for the immersion of bath crystals, which normally tends to leave them unduly damp. This uses recent refinements applied to dual compression and suction pumps. Instead of a fine stream of the crystals slowly moving along a belt, a large tray holding the crystals is fitted inside an immersion apparatus. The pump rearranges the level of the dye liquor, made up of methyl violet, methylene blue, or acridine orange, etc., in which the crystals are momentarily immersed. On withdrawing the surplus liquor, the suction from an open air port initiates the drying process by way of heated air passing through a box fitted with electrical resistance elements. The open formation of the crystals makes drying only a matter of minutes. Before perfuming, cold air is again passed through, and the fragrance in the form of a spray saturates the batch of crystals as they are throughly mixed, after which they are ready for packing.

Care has to be taken in this part of the process in the fixative used, as slightly warm crystals may not retain the fragrance. None answer this purpose more satisfactorily than the resinoids, benzoin, olibanum or vetivert. For pine bath salts a composition comprising 5 per cent each of ambrette R, geranium R, styrax R, and terpeneless lavender oil, with 10 per cent terebene and 70 per cent bornyl acetate, is sometimes used for the perfume. The familiar

violet and rose perfumes are fixed with 25 per cent, violettophyx and roseophyx, and the like as are also lavender perfumes, where, in addition to 50 per cent terpeneless lavender oil and 20 per cent terpeneless bergamot oil, some half-dozen other oils are incorporated.

Indian Vetivert (Khus) Oil

Following the recommendations of its Essential Oil Advisory Committee, the Council of Scientific and Industrial Research, India, in March, 1943, sanctioned a grant for a study of Indian Khus roots and oil. A report by Saheb, A. K. Menon and C. T. Ittyacchan was subsequently presented and recently issued. A summary of this report is given in *The Perfumery and Essential Oil Record* (41:219, 1950). Botanically, Khus is *Vetiveria zizaniodes* (Stapf) of natural order gramineal or grass family. Its habitat is extensive and includes the plains and lower hills of India, Burma and Ceylon.

The oil yield of the roots varies considerably with cultural factors, maturity time of lifting, impurities and the like. The time-honored method of obtaining the oil generally used throughout India is that of distilling the roots in a copper still with water over open fire, and collecting the oil by itself or mixed with sandalwood oil, white mineral oil, etc. Owing to its viscous nature and with specific gravity similar to that of water, its separation from latter is difficult. The oil is poured into separating funnels and the water is gradually drawn off and added to further charges of roots in the still. The aqueous distillate is run through a layer of petroleum ether. The denser the oil the greater and more persistent is its aroma and the better its fixative properties.

On chemical analysis, the characteristics of the oil were found to vary widely. The following table from the original report gives the characteristics of vetivert oils from different parts of the world, including four from India:

	Sp. gr.	*Optical rotation.*	*Refractive index*	*Acid value*	*Ester value. Before acetylation.*	*After acetylation.*
Europe (Java root)	1.014–1.040	25°–38°	1.5210–1.5270	27–65	10–25	130–160
Réunion	0.98–1.020	15°–37°	1.5150–1.5280	4–20	5–20	105–146
Fiji Islands	1.0298	—	—	35.3	—	—
Seychelles	1.0282	27°	—	55.9 (sapon. val. 67.3)	11.4	—
Malay	1.032	—	—	35.8	11.8	162
Jamaica	0.9970	17°.8	1.5243	15.5	10.6	117.9
India (a)	1.011	–30°.65	1.5165	10.5	69.6(?)	132.8
" (b)	1.007	–67°.50	1.5227	9.3	12.3	145.6
" (c)	1.0005	–70°.34	1.5221	8.4	9.3	147.5
" (d)	1.0035	–14°.54	—	29.1	—	146.7

In regard to the constituents of khus oil, according to some it is mainly composed of mixed ketones known as vetirone or vetiverone, with the empirical formula $C_9H_{14}O$ and $C_{11}H_{18}O$, with boiling point at 10 mm respectively of 150–155° and 174–176°, and specific gravity of 0.980 and 1.020. Genvresse and Langlois isolated a sesquiterpene $C_{15}H_{24}$, which they named vetivene—a colorless and odorless liquid—and an alcohol of same (vetivenol), a viscid light yellow odorless oil, of boiling point 169–170° at 15 mm. An ester of this alcohol in their opinion was responsible for the odor, having formula $C_{15}H_{24}O$. Some recent investigators say that there are at least two isomeric sesquiterpene alcohols of name and formula just given, occurring both in the free state and as esters. Vetivenol is a yellowish viscous liquid with odor resembling that of vetivert oil, but sweeter and very useful as a fixative and modifier for heavy perfumes of fine quality.

The khus oil distilled in India varies in qualities according to the varying factors already described. The pure oil without any base—such as sandal oil or white mineral oil—is called "ruh (rooh) khus." It has a light greenish to brown tint and a fairly strong and fine aroma. Common adulterants are cedarwood oils and terpineol, which blend well with the pure oil, also water and sludge are present in some samples. Inferior grades mixed with sandalwood oil or other additives are known as "attar" or "ittar." They are of lighter color and fainter odor, and are used for perfuming cheap soaps, tobaccos, hair oils, and other products. Khus oil is a valuable perfume, blends well with and in various bouquets owing to its tenacity, intensity and remarkable persistency, and enters into nearly every kind of quality perfume for soaps and cosmetics.

Vetivert resinoid of ordinary quality containing the natural aromatic fixative ingredients was sold under various trade names in Europe before the war. Many esters of vetiverol have recently (prior to 1943-4) been put on the market, e.g. those of the fatty acids, and are valuable in heavier, fancy, floral or oriental compositions. Vetiverol itself is an excellent fixative and gives character to many compositions. Vetiveryl acetate has a more pronounced floral note than the oil or alcohol. The synthetic product is said to be a poor substitute, and often quite unlike the real oil.

Chromatographic Identification of Terpenes

A new chromatographic technique, called the "chromatostrip," for the separation and identification of terpenes was described by J. G. Kirchner, J. M. Miller and G. J. Keller at the Fall meeting of the American Chemical Society. This method was developed in the course of determining the volatile flavoring constituents of citrus fruits. The new technique in organic chromatography is performed on adsorbent-coated glass strips in a manner analogous to paper chromatography. Meinhard and Hall (*Anal. Chem.*, 21:185 (1949) used a starch binder to apply an adsorbent to microscope slides, and then used these for radial chromatography of inorganic ions. The method described by Kirchner and his associates employs either starch or plaster of Paris to bind adsorbents to glass strips and then uses the strip as microcolumns by immersing the end of the strip in a solvent and allowing the solvent to travel up the adsorbent by capillary attraction. In this way devlopment of materials spotted near the base of the strip is accomplished. Wide choice of adsorbents and spot or band indicating reagents can be employed, and the desirable features of column and paper chromatography combined. Because of the colorless nature of terpenes, the method is made applicable to the location of ultraviolet adsorbing compounds by the incorporation of Sease's method (*J. Am. Chem. Soc.*, 70:3630, 1948) for detecting the latter. In addition, a series of unique reagents for locating colorless compounds has been developed. By spraying the completed chromatogram with fluorescein solution and exposing to bromine vapor, compounds for which the rate of bromine uptake exceeds that of fluorescein (eosin). Very unreactive compounds such as cineol and camphor are detected by the use of concentrated sulfuric acid or a concentrated sulfuric-nitric acid mixture. The chromatostrip may be used with water-containing solvents by placing the strip in contact with cotton saturated with the solvent.

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ABREAST OF THE MARKETS

RENEWED KOREAN WAR ACTIVATES MARKET, DEALERS REMAIN CAUTIOUS; FLORIDA ORANGE OIL UP AS PRODUCTION FAILS

During the first part of November when the Korean war news was entirely favorable with a quick finish expected, there was a direct reaction felt in the markets. Essential oils, which had been climbing rather rapidly ever since the war's start, slowly began to level off. Botanicals became very quiet, and most chemicals, with the exception of those essential to national defense, remained quite stable.

In the middle of November the market was characterized by sporadic price increases of a slight nature. With the news that small number s of Chinese soldiers had joined the fighting, essential-oil and botanical dealers in this country exhibited more than ordinary caution in discussing the expected price trends. They all seemed to be awaiting the outcome of Korea feeling that the next few weeks would unfold an important story. Commodities had suddenly begun to rise in price again, slowly at first. Shipments of menthol were still coming out of China, the price was fluctuating, and no one dared prophesy how long the commodity would be available.

Items from South America, like bois de rose and the balsams continued to mount in price as collectors flocked to more essential items like rubber. Geranium oil, almost paradoxically, declined for the first time in months, indicating that dealers were ignoring it at the $34 high.

Later in the month several chemicals began to advance, including the hard mercurials, stearates, glycerine, and the metal mercury. The Shell Chemical Corporation announced that it will enlarge its Houston plant by 50 per cent in order to produce more glycerine. One reason given for the enlarged output of the chemical was attributed to the reduced production of natural glycerine from the manufacture of soap due to the greater use of synthetic detergents.

All in all, by the end of November, it appeared as if the market would become tight all over again owing to the war situation. It remains to be seen whether or not consumers will rush in to stock up over their normal needs and once again create artificial shortages. As a matter of fact, many consumers are still using the material they bought in such great quantities at the beginning of the Korean War.

Orange Oil Curtailed by Frozen Juice Market

Florida orange oil went up 20c to $1.45, and the California oil hit the $2 level during the last part of November. Chief factor behind the extremely high prices is the meagre supply of oil in Florida. This has diverted a large portion of the demand to the California oil.

Conditions in the Florida producing area have changed radically in the last six months. It used to be that in the production of frozen orange juice, orange oil was extracted as a by-product. Six months ago, in fact, the frozen juice became so popular, and its production so great, that very large quantities of the oil were produced. The oil glutted the market and the price plummeted to the fantastic low of 40c.

The frozen-juice producers thereupon drastically reduced orange oil operations, realizing that at the 40c-level they lost money for each pound marketed. As the abundant supply was gradually used up, the price of the oil advanced slowly at first, soon to be spurred on as stocks melted away and very little replacement oil entered the market.

The situation has now completely reversed itself, for although demand is strong and the price high, production is very slight. One of the larger frozen-juice producers in Florida, for example, recently installed new equipment in his plant. This machine is designed to extract only the juice from the orange, leaving the oil to be discarded with the pulp. By selling this pulp, called *citrus molasses*, to the Florida cattle industry for cattle feed, the producer can make more money on the oil and pulp (about $35 a ton) than if he extracts it separately and sells it as an essential oil.

This new equipment is designed to extract the juice from the center of the orange by means of a tube which pierces the skin and body of the fruit. An attachment can be added to the machine, at the discretion of the producer, which consists of two sets of opposing prongs. After the juice has been removed these rounded prongs can be forced together under pressure, squeezing the orange like two giant hands clasping one another, and so extract the oil from the skin.

The major difficulty in this operation, however, is that this attachment must be operated at an accelerated rate in order to keep pace with the juicing operations. This means that the moving parts of the mechanism must be very accurately attuned, lest the opposing prongs damage one another. The frozen-juice men, according to information received, find it very expensive to maintain these machines in top working order and so have dispensed with these attachments for expressing the oil.

For this reason, California has become the major source of orange oil.

Glycerine Advances 5c

Refined glycerine prices continued to mount in November, reaching 50¼c on the inside and 58c on the outside limit. At the same time the crude glycerine declined during the end of the month by as much as 5c a pound, although it still remained at a higher price than the refined material. This arrangement, which has been in effect for several months, still prevented refiners from buying the crude material and refining it for resale. As a result, the refiners have continued the practice of several months' standing of processing their own crude glycerine.

(Continued on page 843)

• **Prices quoted in this section were current on the first of this month.**

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HIGH COST OF MOLASSES CUTS INTO ALCOHOL PRODUCTION; SMALL COD LIVER OIL SUPPLY SUFFICIENT TO MEET NEEDS

The alcohol market became progressively worse last month, and is expected to continue in this trend until a new crop of molasses becomes available, perhaps by the early part of 1951. A major factor in the present high price of alcohol, now ranging between 69½c and 97½c, is the skyrocketing cost of molasses. Compared to last year when molasses was selling for 5c a gallon, today's figure is more than four times as great, extending between 20c and 25c a gallon. An added impetus to the climbing price is the feed industry, which has been over-bidding the alcohol interests and has been purchasing molasses for as much as 26c a gallon.

Not only that, but molasses has been a victim of speculation among the buyers in the alcohol industry itself, dealers buying and selling the commodity at no small profit. Sources in Cuba report that the demand for molasses used in the manufacture of feedstuffs for livestock has increased by as much as a third over that of last year. This all means, of course, that the ultimate alcohol production will have to stem from other raw materials in addition to molasses, in order to provide enough alcohol to meet the rising demand, which has greatly increased with the government's synthetic rubber program.

It is not likely that alcohol will be made from potatoes, at least for a while, according to a source in the trade, unless there is a very dire need for it. Factories are not adequately equipped to manufacture alcohol efficiently from potatoes. The Potato Industry Council of Maine have indicated, however, that they have a surplus of 30,000,000 bushels of potatoes which could be converted into 18,000,000 gallons of alcohol at a reasonable cost.

As for grain alcohol, this has increased 5½c a gallon, due to a recent 15c a bushel boost in the price of corn.

The Alcohol Tax Unit, Bureau of Internal Revenue, Treasury Department, released the following data last month on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during the month of September, 1950, as compared with September, 1949.

Production

	Proof gallons	
	1950	1949
Ethyl	37,391,182	22,769,995
*Completely denatured	225,348	1,467,482
*Specially denatured	16,482,895	12,480,434

Withdrawals

	Wine gallons	
	1950	1949
†Ethyl, tax paid	3,660,056	3,671,683
tax free	26,853,500	24,629,142
*Completely denatured	242,866	853,992
*Specially denatured	18,231,360	14,482,913

Stocks

	Gallons	
	1950	1949
†Ethyl	29,432,343	52,419,964
*Completely denatured	34,127	855,277
*Specially denatured	1,432,933	5,876,525

† Wine gallons. *Proof gallons.

Cod Liver Oil Still Tight

Although a limited supply of cod liver oil exists at the present time, it should take care of all normal requirements until late January or February of 1951, when the Norwegian season gets under way. Although a long strike among the trawlers in Iceland has finally been settled, and the boats are resuming operations, it is said the fishermen intend to catch fish for their meat content only, rather than for the oil.

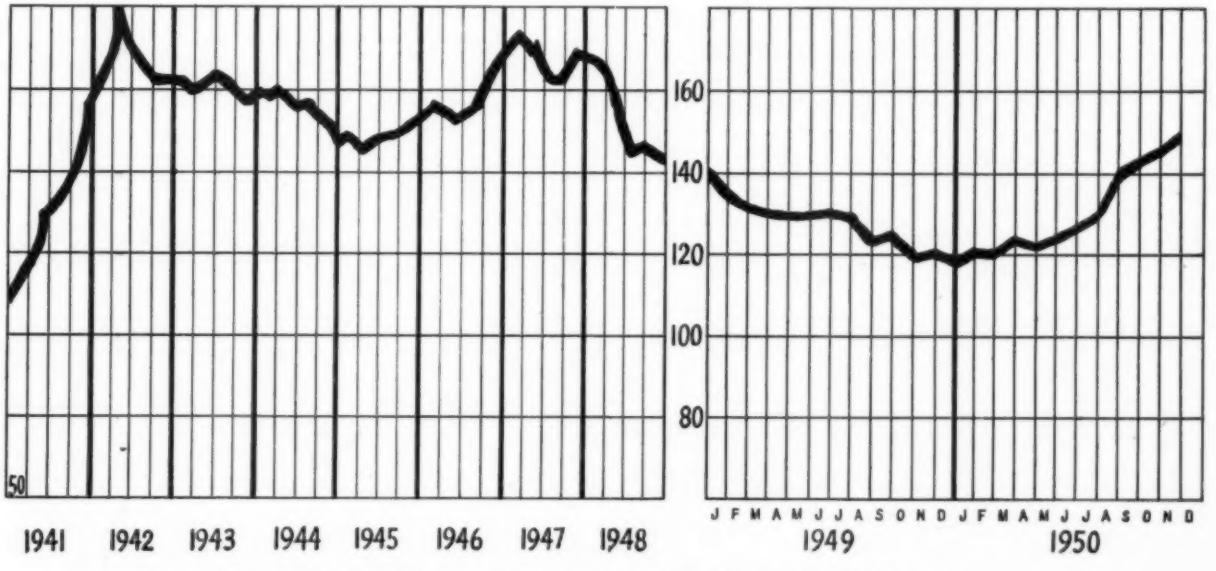
The abnormal demand for cod liver oil in August and September, caused by the Korean flare-up, cut deeply into the supply. The United Nations recenty made large purchases of cod liver oil for rehabilitation purposes in foreign lands; these have reduced the stocks in Newfoundland.

Counterbalancing this curtailed supply picture is the current small demand brought on by the unseasonably warm autumn and early-winter period which a major portion of the United States endured. Now that colder temperatures have arrived demand for the commodity is expected to pick up. Many consumers are out of the market temporarily, for they are using up surplus stocks they bought during the initial Korean scare. They probably will not re-enter the market until the beginning of 1951, unless the renewed Korean War incites more scare-buying.

Eucalyptus Oil Advances

Varied quotations have been received on eucalyptus oil, ranging from a low

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for November advanced from 146.8 to 149.1.

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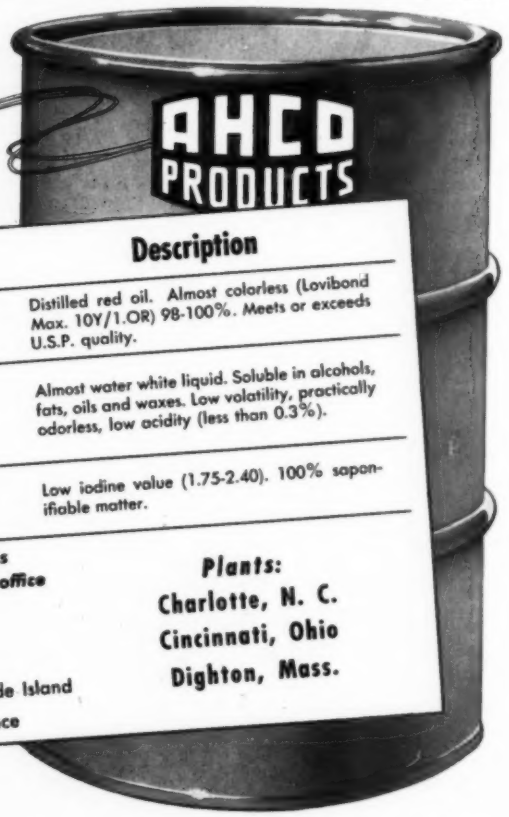

Product	Use	Description
AHCOLEIN 810	Wherever highest quality red oil is required. Soaps, creams, emulsions, etc.	Distilled red oil. Almost colorless (Lovibond Max. 10Y/1.OR) 98-100%. Meets or exceeds U.S.P. quality.
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Balsam Copaiba So. Amer., USP 57c
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Bay Oil 15c
Benzyl Acetate 5c
Bergamot Oil 50c
Bois de rose, Brazilian, 20c
Carnauba Wax No. 1 4c
North Country No. 3 12c
Cedar Leaf Oil 10c
Cedar Wood Oil 5c
Eucalyptus Oil 3c
Glycerine, C.P. 5c
Japan Wax 4c
Lavender Oil 45c
Magnesium Stearate 9c
Mandarin Oil $2.50
Menthol, Natural 50c
Mercury $17
Red Precip. Powd. 20c
Methyl Salicylate 5c
Musk Ketone 20c
Musk Xylene 10c
Orange Oil, Amer. Cold Pressed 20c
California Oil 25c
Ouricury Wax 2c
Phenyl Ethyl Acetate 20c
Phenyl Ethyl Alcohol 20c
Safrol 5c
Sage Oil 5c
Spearmint Oil 25c
Zinc Stearate 9c

DOWN

Almond Oil, Bitter $1.25
Benzoic Acid 4c
Calamus Oil $1
Coriander Oil $4
Geranium Oil, Bourbon $6
Hemlock Oil 50c
Hydroxycitronellal 5c
Juniper Berry Oil 50c
Parsley Oil 50c
Pimento Leaf Oil 5c
Pinus Pimulio Oil 50c
Rue Oil 25c
Savin Oil 25c
Sodium Benzoate 4c
Spruce Oil 50c
Thyme Oil, Red NF 25c
Thyme Oil White NF 25c
Wintergreen Oil $1.15
Wormseed Oil 25c

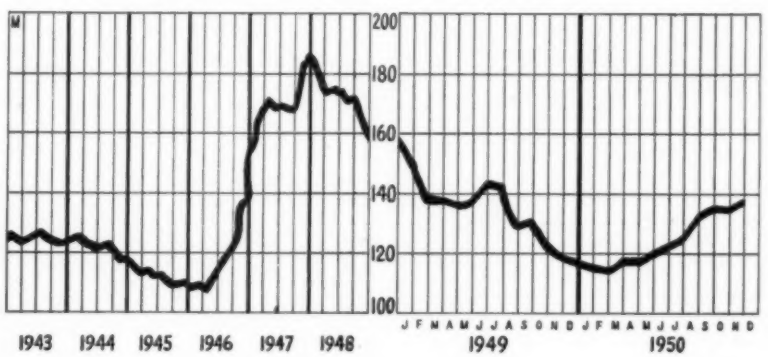
of 78c to a high of $1.05 for the red 70/80 variety, and $1.25 for the red 80/90. Reports have it that distillation of the oil has been retarded owing to a short labor supply and poor facilities for electrical power at the origin.

Orange Oil Production Low

(*Continued from page 839*)

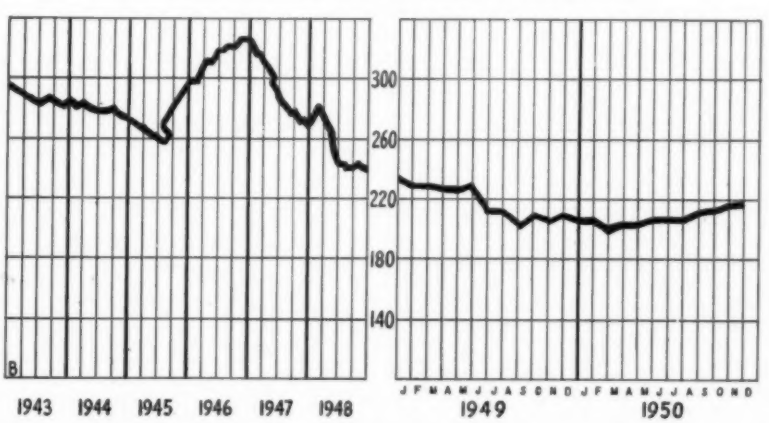
The mere fact that the price of crude glycerine had fallen and more nearly approached the level of the refined material was taken as a sign in some quarters that eventually the customary price ratio between the two grades of glycerine would be restored in the near future, with the crude at a lower price. This would permit once again the small consumers to buy the refined glycerine from refiners at a reasonable figure.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index advanced from 135.2 to 138.0 Alcohol, menthol, and mercury went up.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced very slightly from 217.2 to 217.4. Balsam tolu was higher.

Large Menthol Yield in China

The price of menthol advanced to the range between $11.50 and $11.80 during November while the supply picture became more clouded, especially with the recent Chinese intervention in Korea.

China's peppermint crop yielded a little over half (60 per cent) of the maximum possible yield of menthol, owing to the rainy season—and this was even greater than had been anticipated.

Very little menthol has been reaching the United States from Brazil, for this South American country has been selling the major part of her crop to countries in the European area, since the rate of exchange is higher between Brazil and Europe than it is between that country and the United States. For this reason, Brazil receives more money from Europe than from America for a given quantity.

As a matter of fact, the spot price in New York of menthol is so much lower than the Brazilian quotation that Europe could buy the item from the United States at a cheaper figure than from South America. Government regulations, however, require the European countries to buy menthol from that country in which the material originates.

Unless American dealers want the material in a great rush, it is much more profitable for them to procure their menthol from China than from South America. Shipments out of China take from sixty to eighty days to reach the United States; they take about thirty days from Brazil.

Bergamot Oil Up 50c

Bergamot oil advanced 50c last month, from $6.25 to $6.75. England and many of the European countries have been increasing their demands considerably during recent months. The Consortium in Italy, which has been allocating the oil to the various consuming countries for quite some time, has had to decrease the quota to the United States in order to fill the increasing needs of other areas. Since the demand in this country has remained quite constant, and the supply lessened, the oil has become tighter and more expensive.

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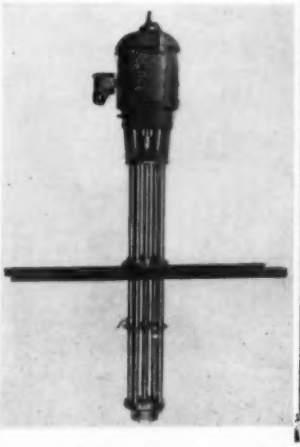

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Cod Liver Oil Production, Iceland

Production of cod liver oil in Iceland in the period from January to August, 1950, totaled 5,433 metric tons, as compared with 6,268 tons in the like period of 1949. The accompanying table indicates that, with the exception of Denmark, the European countries listed bought more cod liver oil from Iceland during the first eight months of this year than in the same period of last year.

Exports of Icelandic Cod Liver Oil

Country	1949 Kilograms	1949 Value (crowns)	1950 Kilograms	1950 Value (crowns)
Netherlands	0	0	5,700,000	18,120,687
Germany	2,000,000	6,376,999	961,771	2,164,058
United States	797,030	3,152,966	854,225	3,180,173
United Kingdom	0	0	704,067	3,191,360
Czechoslovakia	0	0	370,000	992,573
Denmark	264,337	851,348	76,605	216,739
Others	101,423	512,009	546,154	1,935,115
Total	3,162,790	10,893,322	9,212,822	29,800,705

South American Oils Higher

Balsam tolu and balsam copaiba advanced in November, along with Brazilian bois de rose, continuing a trend which began several months ago. As reported in a recent issue, most of the collectors of these oils have forsaken this work for the better-paying jobs of the rubber plantations, and other industries in South America. This has resulted in a diminishing supply of the origin, which is now showing its effect on the spot market. Balsam tolu advanced to $4, according to one source, and to $4.50, as quoted by another. Balsam copaiba jumped up to $1.20, while bois de rose ranges anywhere from $3.95 to $4.35, again depending on the dealer.

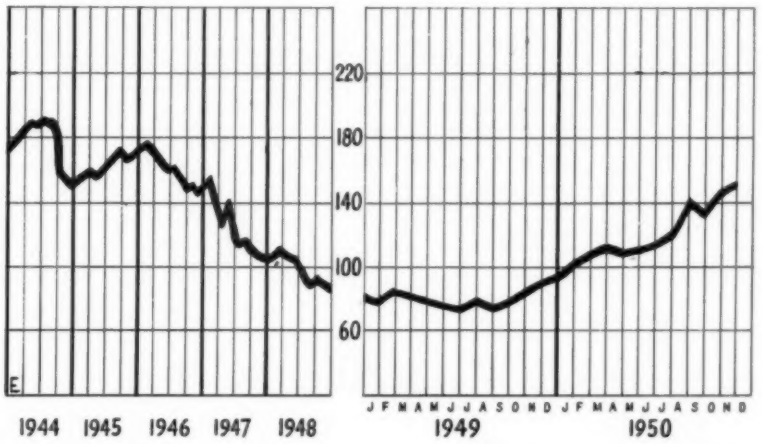
Geranium Oil a Little Lower

The bourbon geranium oil decreased from $34 to $29, according to one source, and to $28 as reported by another. Chief reason for the decline seems to be that dealers understandably lost interest in the oil, when it reached the $34 level a short time ago, and demand has since fallen off rapidly.

It is still not inconceivable that geranium oil may price itself completely out of the market unless it declines pricewise a lot more than it has. Consumers could resort to artificial oils, using a tenth or less of the original essential oil than their present requirements call for. This loss of interest in the oil would then be reflected in Africa, the Reunion Islands and other sources of supply. Over a period of two or three years, the discouraged growers would neglect their crops and seek work in other fields, such as that of vanilla beans. It is too early to determine whether or not this development will occur; however, the possibility is ever present and its fulfillment depends entirely on the future price trend. Toward the end of November reports seemed to indicate further small dealings in geranium prices.

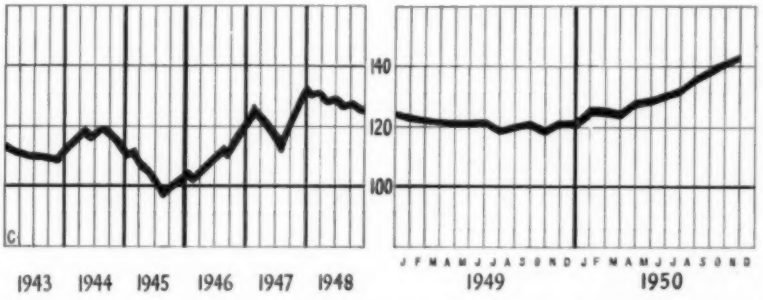
The African geranium oil last month remained between $26 and $30, but will probably follow the bourbon oil closely should the latter make additional changes.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index advanced slightly from 148.8 to 150.2. Bergamot, bois de rose, cananga, eucalyptus, and lavender oils went up.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index went up from 141.1 to 143.5. Alcohol, balsam tolu, glycerine, Japan wax, and menthol were higher.

Peppermint Oil Becoming Firmer

While most of the essential-oil houses held the price of peppermint oil at $6.50 for the natural oil, one source indicated that it had raised its price to the replacement level. The upper limit of the range was extended from $7 to $7.25. An increase in price is anticipated, since replacements were said to be in firm hands.

The redistilled oil remained at $7 on the inside price, but advanced by 15c to $7.65 on the upper limit.

Spearmint Oil Advances

Quotations on spearmint oil have advanced to $4.50 in some quarters, and to $4.75 in others. Replacements of the oil were held back a while until a stronger demand had been built up. It is now expected that the price of the oil will continue to advance.

Coriander Oil Becomes Scarce

Although there was an apparent decline in the price of coriander oil during November, from $30 to $26, the oil is said to be very difficult to obtain from the source. There is no sign of let-up in the near future.

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Use of Gums in Cosmetic Preparations

(*Continued from page 825*)

One of the important characteristics of a hand lotion is a characteristic smoothness to the touch during the application to the hands. This may be better described as a slip. In the author's opinion the natural gums impart this attribute to a greater degree than do the synthetic materials and their replacement by synthetics is therefore not easily possible if the original desired qualifications be retained. The synthetic gums in addition do not offer a convenient substitute for quince seed mucilage's characteristic non flakiness either. The method by which the good qualifications of both may be utilized would be to use both in the same vehicle, but this can be done only if they are not incompatible with each other. It is therefore suggested that adequate preliminary work be done to make sure that this is not the case.

A.P.M.A. Meeting

(*Continued from page 779*)

receive their richest reward, not from their annual financial statements nor from the satisfying sight of some new "miracle drug" (be it sulfanilamide or penicillin, ascorbic acid or Vitamin K, cortisone or ACTH) proudly displayed upon a laboratory or museum shelf, but from the ability of these agents to rescue countless thousands from the stale shelves of the sick-room.

"Using the stirring war cry of an immortal Englishman, medicine appeals to you "give us the tools that we may finish the job." All physicians and patients are grateful for the high ideals of service which motivate the American chemical and pharmaceutical industries. Tonight we should pay honor in particular to the determined courage and dedicated vision of the men and women of Merck & Co. and of Armour & Co., who, as pioneers, labored so hard and so long to make cortisone and ACTH, respectively, available to the world.

"So infinite is the wisdom of Nature, so profound are the secret potencies of cortisone and ACTH that one group of investigators can not "finish the job." We can only make a modest, imperfect beginning. But together, your profession and mine, we will complete these thrilling tasks for we are dedicated to the continuing search for truth; and as we discover the truth we will experience the richest emotions of life."

At the opening session of the meeting on November 27, Dr. Edward S. Mason, Dean, Harvard University Graduate School of Public Administration, spoke on The Impact of the Defense Program on the American Economy. Dean Mason remarked that neither the amount nor the rate of proposed military expenditures of $50 to $60 billion per year will be reached in the near future—"about $20 billion of military expenditures in fiscal 1951, and $30 billion in calendar 1951, represent my best judgment."

"If this is somewhere near the truth, one can probably

say, concerning the next few months, that the main impact of the program on aggregate expenditures has already taken place.

"The outbreak of war in Korea initiated an outburst of consumer and business spending of spectacular proportions—the impact of this spending on output and employment has been large and on prices even larger" "—Output, employment, and price effects have been largely the result of buying in anticipation of procurement and price difficulties—there is some evidence that the general price increase has come to an end.

"—coming toward what appears to be the end of a wave of anticipatory buying and before heavy military spending is yet underway, tax and credit measures are likely to cut fairly deep."

"—the day has long gone by when evidences of increasing unemployment can check a developing pattern of wage-rate increases." "Some increase in unemployment seems to be hardly avoidable during the next few months."

"The picture I am trying to paint is a confused canvas on which both inflationary and deflationary forces are at work—the Director of Economic Stabilization is bound to be set-upon, from one side, by groups demanding that he control inflation and evidence will be presented of rising prices: he will be buffeted by groups on the other side who demand that credit controls be relaxed and who will produce irrefutable proof of increasing unemployment."

"Without a proper tax policy there is no possibility of managing the wage-price level and we shall be inevitably driven forward on a wave of inflation into a system of thorough-going direct controls."

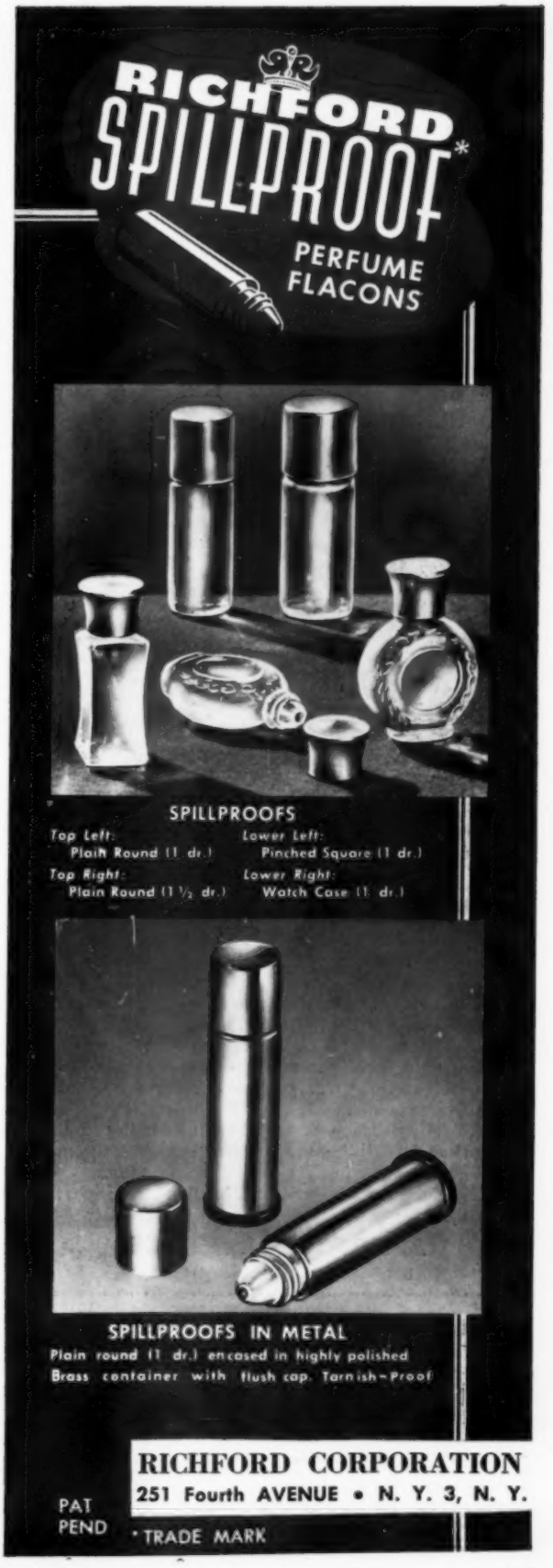
Dr. Paul C. Olsen spoke on Recent Trends in the Retail Drug Trade of Particular Interest to Manufacturers of Prescription Products. He said in part:

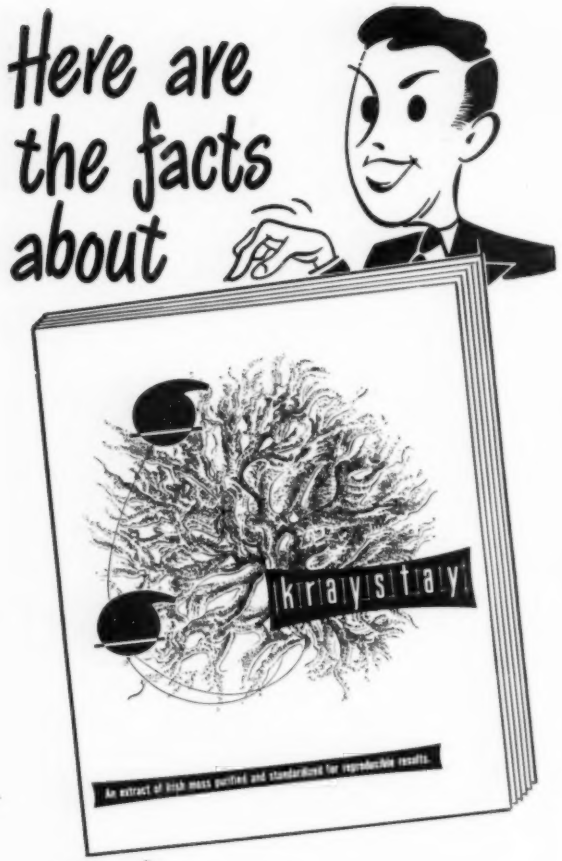
"Total sales of drug stores in 1950 are at the rate about equal to 1949. The 1949 total was slightly under the 1948 peak. In fact, 1949 and possibly also 1950 are the first years since 1932 in which drug store sales failed to top the preceding year. The trend of sales of chain and individually owned drug stores has been about the same. Consequently the share of total drug store sales obtained by chain drug stores has continued each year to be 20 to 25 per cent.

"These general trends conceal individual variations. Even in 1948 which was the peak year so far about one-third of the country's drug stores did not have sales as large as the year before. By 1949 this group of drug stores with falling sales had risen to very nearly half the total. For 1950 it looks as if the total would be over one-half of all drug stores.

"In addition, the drug store sales total is being held to present levels by a rise in the number of drug stores. Between 1940 and 1946 there was a drop of about one-eighth or perhaps one-seventh in the total number of drug stores. Now a large part of that decrease in the number of stores has been made up.

"The stationary and downward trend in drug store sales in the past few years is enough in itself to have an





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appreciable effect on profits. As a matter of fact, in addition, a downward trend in drug store profit rates set in even before sales stopped rising. The peak profit rate was 1945. Gross margins realized that year were no higher than those of years before or since. The higher profit rate was the result of a phenominally low expense rate. That phenomenally low expense rate in turn came from a general inability due to labor shortages to hire needed help. Another strong influence was the merchandise shortages which made virtually any item on hand readily salable.

"Since 1945 the drug store expense rate has been rising and the profit percentage has been steadily reduced. Until 1949 this reduction in the profit rate was offset by enough rise in the sales total to maintain the dollar amount of profits. Now that the general rise in sales has stopped, the dollar amount of profits has begun also to slip off.

"It is a noteworthy fact that the selling price of the packaged articles that make up the bulk of the sales of most drug stores has risen since 1939 the least of any important group of consumer products. Indeed many thousands of packaged articles are sold now in drug stores at the same prices as in 1939. Unfortunately, the payments made by a drug store proprietor for the services that make up his store expenses have not shown the same stability. A situation has developed in which a substantial part of drug store sales is being made at 1939 prices but the services needed now by the store owner to make these sales must be paid for at 1950 prices.

"There is one outstanding exception. It is prescriptions. In 1939 the average price received for prescriptions was 90 cents. Now it is $1.60. This is not the result of any change in prescription pricing methods. It is the result of the revolutionary changes in late years in the types of medication prescribed. Nonetheless these facts show the opportunity that exists for a drug store proprietor up against a general downward trend in sales and profits.

"There is another reason that a drug store proprietor finds in his prescription department the way to higher sales and profits. When a store owner is working in his prescription department he is using his highest skill. It seems logical therefore that the greater the use that is made of this highest skill the higher the store income should be.

"The correctness of this conclusion is shown by an examination of drug store profit records. Such an examination shows that as the proportion of prescription receipts to total sales rises in a drug store, there is a corresponding upward trend in both the profit rate and the total amount of profits."

Patent Thoughts and Trends

(*Continued from page 821*)

making racemic muscon, a material used in perfumery. The product was previously prepared synthetically from cyclopenta-decanone (Helv. chim. acta 17, 1309 1934), from beta-methylated dinitril of thapsic acid (A. 512, 162 1934)

or from ethylic ω - brom - beta - keto - δ - methyl - hexadecanoate (B. 75, 1197 1942,) all of these methods using primary materials that Stoll says are very expensive or difficult to obtain.

Stoll's process is based on the utilization of 1.12-diacetyldodecane which is said to be a new and easily available material. Claim 1 gives a general idea of the process employed:

A process for preparing beta-methyl-cyclo-pentadecanone which comprises cyclizing 1.12-diacetyldodecane by intramolecular condensation to form beta-methyl-beta-hydroxy-cyclopentadecanone, dehydrating the beta-methyl-beta-hydroxy-cyclopentadecanone to beta-methyl-cyclopentadecanone and then saturating by hydrogenation the beta-methyl-cyclopentadecanone to beta-methyl-cyclopentadecanone.

RECENT PATENTS

2,525,981—**D. Webster—Hair Curler.**

2,526,231,2—**Parke, Davis—5-Phenyl-5-Pyridyl Hydantoins.**

2,526,283—**C. Schmidt—Permanent Hair Waving Device.**

2,526,417—**Upjohn—Pyrrolidylalkylamino Chloroquinoline.**

2,526,577—**Tip-Top Products Co.—Hair Curler with Retractable Comb.**

2,526,943—**S. U. Chimiques Rhone-Poulenc—Therapeutically useful N,N-Dialkyl-N′-Phenyl-N′(2-Heterocycle or Heterocyclyl-alkylene) Ethylenediamines.**

2,526,961—**Ciba—Antisera of High Titre.**

2,527,169—**M. A. Wiggins—Cosmetic Receptacle with Powder Puff Retainer.**

2,527,218—**T. J. Heaton—Hair Curler.**

2,527,304—**Comm. Solvents—Manufacture of Penicillin.**

2,527,323—**Comm. Solvents—Substituted Derivatives of N,N′-Methylenebis-(hexahydropyrimidines).**

2,527,421—**Ciba—3,4-Dicarboxy-2-Furan-Alkanols.**

2,527,425-7—**Geigy & Co.—Stilbene Disulfonic Acid Products.**

2,527,527—**Sterling Drug — Methylenedioxy Tertiary Amines.**

2,527,579—**Gibons Anstalt—Hemostatic Agent.**

2,527,686—**M. H. Sandberg—Mouthwash.**

2,527,810—**Hoffmann-LaRoche—Ephedrine-penicillin.**

2,527,999—2,528,000—2,528,001—**Wisconsin Alumni Research Foundation—Equilenin Compounds.**

2,528,025—**S. C. Johnson & Son—Isolation of Sterols.**

2,528,162—**Eli Lilly—N-Dimethylaminoethylacridan.**

2,528,174-7—**Eli Lilly—Procaine Salts of Biosynthetic Penicillins.**

2,528,542—**Schering Corp. — Halogenhydroxyaryl aliphatic acids. X-ray Contrast Media.**

2,528,612—**T. and H. Schildkraut—Cosmetic Case.**

2,528,880—**Upjohn—Separation of Adrenal Cortex Hormones from Adrenal Glands.**

2,528,939-40—**Upjohn—Pyrrolidylethyl Carbazole and Indole Compounds.**

2,529,152—**Burroughs Wellcome—Extraction of Insulin.**

The Demonstrator Cases

(Continued from page 767)

and desist orders on the part of the Commission which would force them to furnish demonstrators to all their accounts on "proportionately equal terms." In fact a representative of Bourjois and Barbara Gould told the Commission at a hearing that forced abandonment of the industry's present system of furnishing paid demon-

KOMMON SCENTS!

Approach of the Yule Season has one considering the most appropriate gifts for our nation's leaders. After disposing of lipsticks for former male members of the State Department and deodorants for Congressman Rankin, we are exploring these possibilities:

For President Truman, lightweight, indoor type earmuffs, to be worn during Margaret's rehearsals; for General Eisenhower, a coverall uniform, with helmet attached, to make it Draft-proof; for Governor Dewey, a fountain pen with invisible ink, in case his former Lieutenant is in a letter writing mood; for Senator Joe McCarthy, an omni-book of the Kinsey Report, Das Capital and Tales by Ananias.

In the field of sports, a special 15-watt bulb for Branch Rickey, to balance the economy of the Pittsburgh Pirates for night games; for Leo Durocher, a book on Mental Telepathy Applied, with special regard to umpires; for Joe Louis, a youthful opponent who will forget to duck; for Lou Little, Columbia backfield that never made Phi Beta Kappa.

In the entertainment world, a suppress agent for Roberto and Ingrid Rossellini; for Faye Emerson, a manual of breathing exercises; for Milton Berle, new comedians from whom to get fresh material (cheaper than hiring new writers!); for Fred Allen, a valet to carry the bags under his eyes; for Rodgers and Hammerstein, a chute from the box office of "South Pacific" direct to their bank.

The Cosmetic Industry, of course, got its big gift in advance. We are now enjoying the end of a bitter political campaign that permits us to resume hating one another on a non-partisan basis.

George Fiedler

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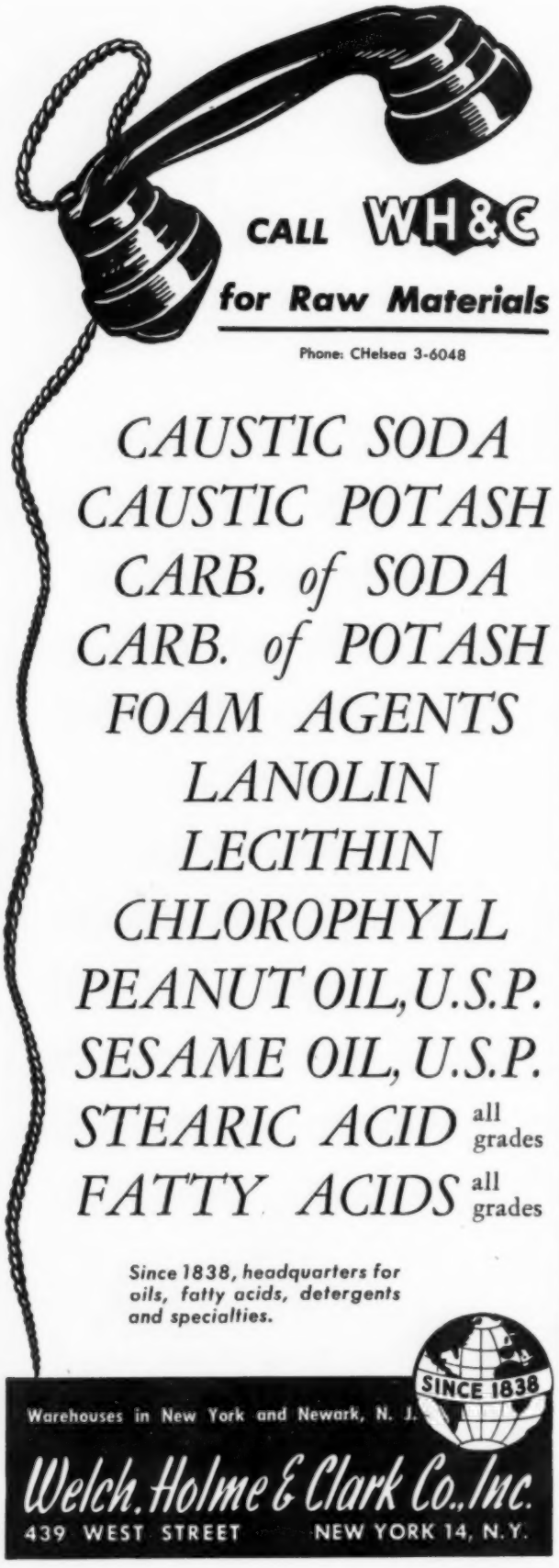


strators to some retail stores could mean the end of marketing treatment line products.

Hudnut's attorney, Samuel M. Lane, argued before the Commission that no sound basis exists for criticizing the system whereby the manufacturer admittedly furnishes only some of its retail accounts with demonstrators. Mr. Lane contended that the Robinson-Patman Act does not require that Hudnut furnish indirect accounts (those who buy through wholesalers) any special services at all. In spite of this, however, he said that Hudnut furnishes all, for its own good, with such assistance as cooperative advertising, institutional advertisements, displays, and other things. Mr. Lane conceded that Hudnut makes no attempt to furnish all of its direct accounts with wholly or partially paid demonstrators, stating that demonstrators are installed wherever Hudnut considers them "economically sound." In answer to a question from Commissioner Jack Carson, as to the yardstick used to determine which stores are to be given demonstrators and in what quantity, Mr. Lane said that experience has shown that demonstrators should not be installed in stores which carry less than $1,000 worth of Hudnut products, have less than four feet of counter display for the products, and are not in locations guaranteeing heavy traffic and therefore good volume. He admitted that the formula was more or less informal and that it had been developed from experience long after the demonstrator system had been inaugurated. Hudnut is after maximum volume, and therefore sought to place its demonstrators where it is felt they would be of the greatest value, said Mr. Lane.

Philip Courtney, President of Coty, told the Commission that his company is being harassed for no valid reason by FTC criticism of the system whereby it furnishes only some of its retail accounts with demonstrators. He said that Coty's record is clear and that there is no proof of any showing of unfairness, injury to competition, or injustice. To the contrary, the company is helping its small dealers, instead of discriminating against them, by sales aids appropriate to their stores, he said. For all practical purposes, if the FTC followed the legalistic reasoning in the Arden case, demonstrators would be outlawed, according to Mr. Courtney, who contended that the Robinson-Patman Act did not intend to outlaw demonstrators, one of the authors of the Act having made this clear.

"We have been attacked as being in violation of Subsection 2(E) of the Robinson-Patman Act, while I contend that the practice of paying for demonstrators comes under Subsection 2(D) of the Act," he said. This point was being raised, Mr. Courtney told the Commission, because it was important to understand that payment for demonstrators in department stores was made strictly on a "quid pro quo" basis, which practice is covered by Subsection 2(D). Mr. Courtney said that his attorneys have advised him that it would be unlawful to pay for demonstrators in stores unable to give commensurate services or facilities in exchange.

Mr. Courtney pointed out that a distinction exists

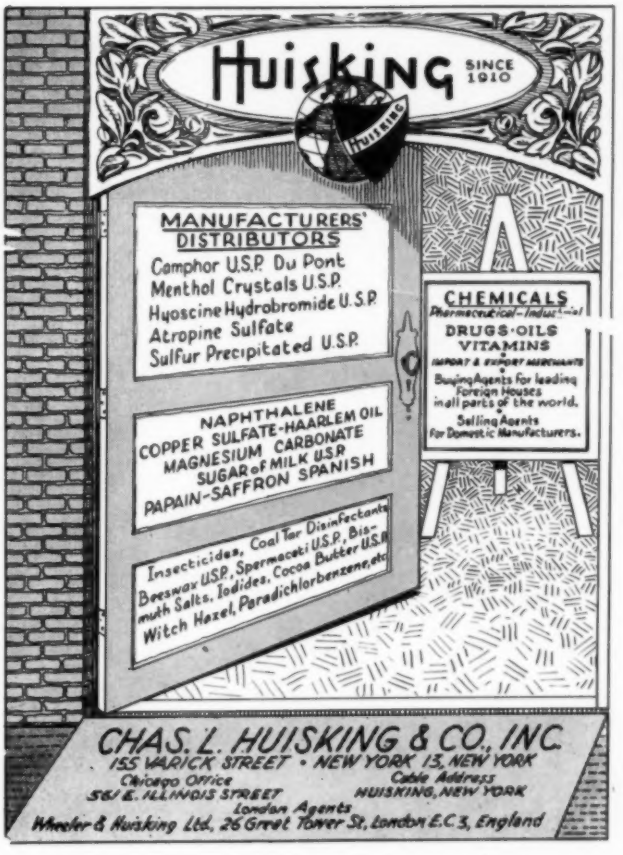
between Subsections 2(D) and 2(E) of the Robinson-Patman Act. Under Subsection 2(D), Mr. Courtney said, payments and allowances are required to be made to customers who are in competition with each other, while Subsection 2(E) stipulates that the seller must accord the same facilities or services to all purchasers regardless of whether they are in competition with one another. Thus, Subsection 2(D) was meant to cover payments to customers on a "quid pro quo" basis, while 2(E) was meant to cover services or facilities given to purchasers, mainly gratuitously, he explained.

Mr. Courtney maintained that Congress did not intend to eliminate the practice of demonstrators, and did not give to the descriptive phrase "proportionately equal terms" the arbitrary and unrealistic interpretation given by the FTC counsel. Demonstrators cannot be proportionalized mathematically unless it be on terms like volume, which would constitute a violation of the Robinson-Patman Act, since this would merely be an additional discount, he said.

Philip R. Layton, principal attorney of the FTC, contended that Coty's demonstrator practices are a violation of Subsection 2(E) of the Robinson-Patman Act, as originally charged and asked for an Arden order in the case which would stipulate similar services must be given to all retail accounts. When asked by one of the Commissioners whether his understanding of the word "similar" meant equal or not, Mr. Layton replied that if one store received $10 to pay a demonstrator, then a proportionate amount should be given to its competitors.

With regard to the contentions of Bourjois and Barbara Gould, FTC Attorney Layton attacked the industry's attempt to justify selective furnishing of demonstrators by pointing to furnishing of substitute services. Nor could reciprocal services and facilities, such as counter space, display, location of the cosmetic department, and other things, be measured to make them acceptable as terms for receipt of demonstration service, according to Mr. Layton. On the other hand, Mr. Layton said, volume of purchases would be an automatic and fair measure for furnishing demonstrators.

In answering the Hudnut arguments, Mr. Layton noted that Hudnut furnished only a small fraction of its accounts with demonstrator services, pointing out that those who failed to get this type of service accounted for 55 per cent of Hudnut's sales volume. And of those who did get demonstrators, some received more than others, said Mr. Layton, He also contended that, under the law, the indirect accounts also were customers who are entitled to proportionately equal treatment. Many of these are drug stores which now get the aid of special Hudnut drug store representatives. Mr. Layton said that these individuals, who are paid by the drug store and not by Hudnut, "completely upset the drug store for a few days and make a beauty parlor out of it." He contended that each of Hudnut's customers is entitled to the same marketing tools as furnished proportionately to others, adding that he knew of no single retailer who could not use a clerk to sell cosmetic products.



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Just what action the Commission will take is of course unknown, but it is generally believed that cease and desist orders will be issued if the manufacturers will not agree to stipulations, and at this late date there does not seem to be much change of these bitterly contested cases being settled by stipulation. It is thought by many that the Commission will issue orders following the conditions of the Arden order, and then this will be followed by the promulgation by the Commission of a code of fair trade practices which will establish these same conditions for the marketing of all cosmetics. With a court decision to sustain it, it is thought that this is the logical course for the Commission to follow. However, there are some who believe that the Commission as now constituted might agree with the order in the Arden case, If this is so, the Commission might dispose of these cases on a different basis. Such a new basis could then be applied to Arden and also be the provisions for a somewhat different code of fair trade practices.

Research in Endocrinology

(*Continued from page 769*)

is the alteration of the hormonal state of the body in such a way as to affect the growth of the malignancy.

Examination of any of the current journals devoted to endocrinologic research reveals a pre-occupation with two subjects—the application of radioactive elements in a wide variety of investigations and the use of cortisone and ACTH as examplified by the motif for this occasion.

The availability of artificially prepared radioactive elements and their use as tracer substances has naturally attracted the attention of endocrinologists, not only for the aid which the use of these materials might furnish for physiological problems but also for their therapeutic use. In this field, the use of radioactive iodine has been most outstanding and most readily applicable for study, because of the unique relation of this element to the function of the thyroid gland and the selective affinity for iodine manifested by this gland. As a result of these studies, the physiology of the thyroid gland has been clarified and radioactive iodine has found a place in therapeutics. Its use in certain cases, albeit only a small proportion of all, may perhaps offer the first successful therapy of metastatic carcinoma of the thyroid.

Two decades ago, interest in the complex physiological processes concerned in the maintenance of homeostasis in the organism was centered in the sympathoadrenomedullary system. Today attention is focused on the pituitary adrenocortical system and the role of the adrenal cortex in the response of the organism to stress.

Of the 28 steroids which have been isolated from adrenal cortical extracts, some (e.g., desoxycorticosterone) have been found to have a predominant effect on the electrolyte and fluid balance causing the urinary retention of sodium and chloride, an increased rate of

excretion of potassium, an increased plasma and extracellular volume and a decreased concentration of sodium and chloride in the seat. Others (e.g., cortisone) affect the intermediary metabolism of protein and carbohydrate, increasing the conversion of exogenous carbohydrate to glycogen, of endogenous protein to carbohydrate, the mobilization and utilization of fat, the blood glucose level and the excretion of urates and decreasing the rate of oxidation of available carbohydrate and the number of circulating lymphocytes and eosinophiles. Still another group of steroids (e.g., androsterone) exhibit androgenic and anabolic activity with retention of nitrogen, phosphorous, potassium, sodium and chloride. The existence of such a diversity of actions by chemically closely related compounds derived from a single organ furnishes an obvious basis for unlimited imaginative speculation which has been thoroughly exploited. It must be emphasized that the exact nature of the secretion of the adrenal cortex is still conjectural and based for the most part on such indirect evidence as the effects induced by the above-described compounds or the metabolic changes which follow trophic stimulation of the gland.

As is to be anticipated, the empiric demonstration of the ameliorative effects of cortisone and ACTH in rheumatoid arthritis and their experimental use in other diverse disorders of questionable etiology, has led to many investigations with these potent drugs. The mere fact that a compound has potent actions when injected is, of course, no proof that it normally plays a physiological role in the body, for such effects might be a result of a pharmacodynamic action. The occurrence of the compound in adrenal extracts or in the urine also is no proof of its role in the organism except perhaps as a derivative or product of catabolism of some precursor. In man, ACTH has been found to induce all the metabolic changes which have been ascribed to the adrenal cortex, namely, the metabolic changes produced by the 11, 17 oxysteroids, the sodium retention of desoxycorticosterone, the lymphocytopenia and eosinophenia induced by cortisone and the acne and hirsutism induced by androgens. These observations form the basis for the belief that the pituitary serves as the activator of the adrenal cortex in response to stress.

The discovery by Hench, Thorn and their collaborators of the ameliorative effects of cortisone and ACTH in the treatment of the collagen diseases and their capacity to modify other clinical disorders, has opened a new era in the therapeutic application of the cortical steroids. Attempts have been made to discover the mechanism whereby these therapeutic effects are based. Obviously the assumption that these disorders are induced by hyperactivity of the adrenal cortex is untenable unless one assumes that the particular tissues affected in the collagen diseases lose their normal sensitivity to the adrenal cortical hormone and thus require an amount of these hormones which induces symptoms of hypercortical activity in other tissues. Cortisone has been shown to alter the immune response

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of the organism as illustrated by its capacity to inhibit the Koch phenomenon, the tuberculin reaction and the production of antibodies. This, as well as its demonstrated effects in inhibiting the reactivity of connective tissue, in causing the involution of lymphatic tissues, in causing the migration of circulating eosinophils into the intercellular tissue spaces and its effects on the central nervous system would offer a more objective basis for the effects induced by this drug and indirectly by ACTH, through its action on the adrenal.

Even if we conclude that cortisone and ACTH exert their effects by a pharmadnyamic rather than a physiologic mechanism, the fact remains that they afford a new tool for the modification of a group of disorders, the previous unsatisfactory therapy of which left much to be desired. And one may reasonably anticipate that the field of investigation thus opened will reveal newer and perhaps more satisfactory therapeutic agents. In this connection, it is of interest that hydrolysis of pituitary extracts or preparations of ACTH enhances their potency, thus offering promise of a synthesizable polypeptid being ultimately available for therapeutic use instead of the expensive and difficultly prepared protein now available.

I have, in this brief resume, attempted to summarize the broad fields of interest which research progress in endocrinology has followed in recent years. To merely enumerate the more specific advances in a single field would be impossible in the time alloted for this presentation. With each advance beyond the frontiers of the unknown, new and unpredicted vistas have been revealed which promise even greater accomplishments, than have been achieved, for the future.

Ion Exchange Resins

(*Continued from page 772*)

In considering the specific water requirements of the pharmaceutical industry, Winters[22] calls attention to the possibility of micro-organism growths in the resin beds. Many materials have been tested as means of preventing bacterial contamination of these organic resinous substances, but only recently was the problem solved satisfactorily. This was achieved through the use of a special chlorine—liberating material called "Chloromelamine." In view of the progress made in ion exchange operations, Winters suggests that the U. S. P. revision committee consider deionized water of proper quality as an acceptable solvent for drug compounding.

Actually, aside from their use in water treatments, the ion exchange resins have a number of valuable applications in the pharmaceutical industry. Thus, materials which exist in low concentration or in admixture with other complex substances can often be separated and concentrated by means of ion exchange resins. For this and other reasons, these resins are being used in the isolation or purification of alkaloids, vitamins, amino acids, enzymes, and other substances; in the

fractionation of blood plasma; in the production of antibiotics; and for various other purposes.

An important wartime development was the use of ion exchange resins in a process for extracting cinchona alkaloids from the bark in the forests where the trees grow. This has been described[23] as "a most notable pharmaceutical and medical advance," not only because it provided a better and more efficient means of obtaining valuable quinine, but also because the method could be applied to the extraction of other alkaloids, such as morphine, atropine and cocaine.

Early in 1946, Applezweig and Ronzone[24] reported the successful use in the field of a portable quinine extraction plant consisting of maceration tanks, an ion exchange adsorption system, and a distilling unit. This process has been improved considerably since then through the use of newer types of exchange resins. It is stated[25] that these high capacity, carboxylic acid type exchangers should also be useful in the extraction of other alkaloids.

Applezweig[26] has employed a cation exchanger for the recovery of atropine, scopolamine, and morphine. More recently he[27] was granted a patent for a process by which alkaloid-containing juice from fresh plants is extracted by contact with ion exchangers. The method is used for the extraction of atropine, scopolamine and quinine alkaloids. Aside from their use in the extraction of various alkaloids, ion exchange resins have also proved valuable as analytic agents for making alkaloid determinations or assays.[28,29]

Nicotine, another important alkaloid, may also be extracted efficiently by means of ion exchange resins.[3,25] It must not be forgotten that, aside from being a valuable insecticide, nicotine also serves as an important raw material for the manufacture of the B vitamin, nicotinic acid and its amide.[30]

Other members of the vitamin B complex may be obtained with the aid of ion exchange resins. Herr,[9] for example, has provided details on their use in the separation, recovery and concentration of thiamine. He calls attention to the fact that this method may be used either as an analytical tool or for the recovery of thiamine and riboflavin from waste solutions. Winters[22] has also pointed out that vitamin recovery by ion exchange appears to be of most practical significance where fermentation processes are involved. He notes that the brewing and distilling industries, in particular, have large quantities of fermentation residues that contain relatively high concentration of the B complex vitamins, as well as amino acids and other materials of nutritional value.

Using an anion exchanger, one group of workers[31] has devised a process for recovering folic acid, a member of the B complex used in the treatment of anemia, from liver and kidney tissue. Other investigators[32] have shown that ascorbic acid can be recovered from waste citrus juices by adsorption on an anion exchanger.

The process of separating and concentrating amino acids by means of ion exchange resins has received considerable attention because of the increasing demand

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for these nutrients for dietary and therapeutic use. Careful adjustment of the conditions permits the process to become quite selective, even with materials as complex as the amino acids.[3,22,25] For example, Block[33] has developed a process which makes use of an anion and cation exchange resin for the separation and concentration of the neutral, acidic, and basic amino acids in protein hydrolysates.

An important advance has been the application of ion exchange resins in protein purification. Specifically these materials have been used to fractionate blood plasma proteins; the most familiar being the immune serum globulins and serum albumin. Thus, in a report given at the recent meeting of the American Chemical Society, Reed and Jones[34] described how a mixture of cation and anion exchange resins is used to remove salts at a constant pH from a solution of blood serum protein. Upon progressive removal of the salts, the various globulin fractions are precipitated. The new process offers a number of advantages over the older methods.

Others have made use of ion exchange resins. Quick,[35] for instance, has adapted a cation exchanger to the removal of calcium from blood plasma. Also worthy of mention is the use of ion exchange resins in the isolation of blood group A-specific substance from hog gastric mucin.[38]

Attention has also been turned toward the application of ion exchange resins to the purification of antibiotics. Thus, by means of a cation exchange resin, Grant[37] has been able to convert the calcuim salt of penicillin directly to the sodium salt, thereby avoiding such disadvantages of prior methods as marked loss of potency and the addition of impurities. More recently, an ion exchange resin has been used for the separation of streptomycin and mannosidostreptomycin from fermentation broths.[38]

The ion exchange resins have also proved useful in the production of other drugs and various chemicals of pharmaceutical importance. Indicative is the use of the ion exchange process in the treatment of wheys for lactose recovery[3] and in the recovery of tartrates from grape wastes and citric acid from citrus juice.[19] A new process[39] for preparing paraldehyde makes use of a cation exchange resin. A recently patented method[40] utilizes an ion exchange resin to break emulsions for the recovery of wool fat. Kahler[41] has reported on the use of ion exchangers for the purification of glycerine. Here they serve to remove ionized solids, as well as color—and odor-producing substances, from dilute aqueous glycerine solutions. Monosodium glutamate, widely used in food flavoring but also of interest in the medical field, may be recovered from the ion exchangers used in beet-sugar refining.[19]

From studies of the application of ion exchange to the chemistry of nucleic acid, Cohn[42] was able to report, among other findings, the production of all nucleotides and related compounds in pure form. Lo Grippo[43] has reported the partial purification of viruses with an anion exchange resin.

In addition to all of these actual and potential uses in the production of drugs and biologicals, certain ion exchange resins show considerable promise as therapeutic agents. Prominent in this connection is the use of synthetic resin adsorbents in the treatment of various gastrointestinal disorders. As noted by Winters,[22] the possibility of such utilization was indicated in the studies of Segal and his colleagues[44] and of Martin and Wilkinson.[45] Though working independently, their investigations suggested the use of modified anion exchange resins to neutralize gastric acidity, such as is associated with peptic ulcers.

Polyamine methylene resin of this type is used in several preparations now available to physicians. As noted in a consideration of a product of this kind by the Council on Pharmacy and Chemistry of the A. M. A.,[46] the plyamine methylene resin is a synthetic acid-binding material capable of withdrawing acids from solution. This property has been utilized clinically by administering the resin orally as a gastric antacid for the control of symptoms in simple hyperacidity and in peptic ulcer. It is noted that the antacid effect apparently results from a temporary binding in the stomach of gestric hydrochloric acid and pepsin which are later released in the intestine. The resin itself is then eliminated unchanged from the gastrointestinal tract without any permanent ionic disturbance of the body fluids. It is also pointed out that the resin is essentially non-toxic, but large doses may cause nausia and vomiting unless the taste of the resin is suitably masked.

Of interest in this connection is the observation by Martin and Wilkinson[45] that, "Resins as antacids closely approximate the ideal of an insoluble, non-irritant substance which, while neutralizing acid, has no effect on the acid-base equilibrium of the body, does not alkalinize the urinary tract, does not cause diarrhea or constipation, and has no serious effect on the mineral balance. It is not our purpose to propose exchange resins as absolutely ideal antacids but rather to propose them as distinct improvement over those currently in use."

In some preparations, such as "Resinat" (National Drug Co., Philadelphia, Pa.) and "Exorbin" (Ayerst, McKenna & Harrison, Ltd., New York City), the anion exchange polyamine resin is the sole active agent; the products being supplied in the form of capsules, tablets and powders. The resin is also provided in combination with other agents to provide added effects. Thus, one tableted product, "Resmicon" (Whittier Laboratories, Chicago, Ill.) combines the protective action of gastric macin with the acid- and pepsin-controlling action of the ion exchange resin.

In another product called "Resion" (National Drug Co., Philadelphia, Pa.), the resin is used in conjunction with sodium aluminum silicate and magnesium aluminum silicate in a specially prepared liquid vehicle. Described as an *intestinal* absorbent which combines

(*Continued on page 860*)

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Industry's Books

(*Continued from page 835*)

Ion Exchange Resins, by Robert Kunin and Robert J. Myers, Rohm and Haas Co., 212 pp., John Wiley & Sons, Inc., New York, $4.75.

Ion Exchange Resins is written to meet the needs created by the rapid increase in the industrial and research applications of ion exchange that followed the development of high capacity, specific, and durable ion exchange resins. Ion Exchange Resins, which correlates the widely scattered literature on the phenomenon, provides the scientist and engineer with reliable information on all phases of ion exchange and ion exchange resins. In addition to its reference use, the book is also valuable as an introduction to the subject, dealing as it does with both the theory and practice of ion exchange resins. Furthermore, the book covers the phenomenon of ion exchange thoroughly, including:—The theory underlying the mechanism of ion exchange in ion exchange resins—The usefulness of these resins. The operational and engineering data associated with resins—The methods of using resins in the laboratory and in industry. Since ion exchange is now being recognized as a valuable unit operation like distillation, absorption, and filtration, Drs. Kunin and Myers have incorporated a description of all types of ion exchange resins in their book. To do this, they have included a considerable amount of their own unpublished data on commercial resins.

The Essential Oils, by Ernest Guenther, Ph.D., Vice President and Technical Director, Fritzsche Brothers, Inc., New York, Volume Four, 752 pp., Illus., D. Van Nostrand Company, Inc., New York, $12.

This Fourth Volume on The Essential Oils, deals with the individual essential oils of the plant families Gramineae, Lauraceae, Burseraceae, Myrtaceae, Umbelliferae, and Geraniaceae. This follows the principle established in Vol. III of this series. The present volume, therefore, consists of monographs on individual essential oils, arranged according to the botanical family of the plants from which they are derived. The important oils from six families are included. The author has again purposely avoided adherence to any strict taxonomic system in the sequence of these plant families, believing that the order followed here allows for greater flexibility in the practical use of the work by the essential oil producer, chemist and dealer. However, at the end of the final volume of the series there will be a table or key showing the classification of the essential oil plants according to a modern botanical system. This Fourth Volume by Dr. Guenther is as comprehensive as the previous volumes and adds immeasurably to the available information on this group of essential oils.

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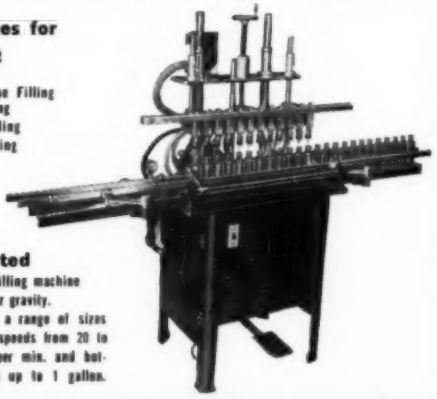

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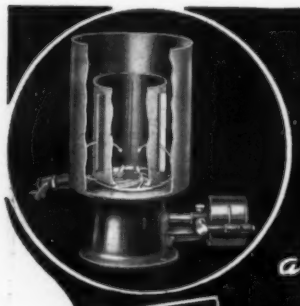
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Ion Exchange Resins

(*Continued from page 857*)

the properties of ion exchange and physical adsorption, this resin-silicate combination appears to have a somewhat broader range of indications than the resin alone.

The polyamine methylene anion exchange resin preparations have found their greatest use in the treatment of peptic ulcers. It has been stressed[46] that, like other antacids, the resin should be considered only as an adjunct in the treatment of this condition. However, quite a number of reports indicate its value for this purpose.[47-50] Kraemer,[51] for example, treated 100 persons with gastric ulcer with this resin. Of these patients, 85 per cent have been kept symptom free on the ulcer regimen using the resin as the only antacid.

Weiss and his associates[52] used the same product as an adjunct in the management of ulcers, hyperacidity, gastritis, heartburn, cholecystic conditions with dyspepsia, and in some forms of colitis with results that were clinically satisfactory and subjectively gratifying to the majority of the patients. In their group of 120 ulcer cases, symptomatic relief occurred within 48 to 72 hours and X-ray follow-up showed regression of the ulcer crater in two to four weeks in the majoirty of cases, provided complications were absent. These clinicians call attention to the fact that a notable property of the resin is its beneficial effect on pain. Similarly, in observations on ten cases of peptic ulcer treated with a polyamine anion exchange resin, Bergen and Greenberg[53] noted that the nature and action of this agent are such that "relief of pain is readily obtained without adverse effects."

As indicated in the report of Weiss and his colleagues,[52] the resin may be employed in the treatment of some forms of gastritis, heartburn and dyspepsia. Of kindred interest is Kasdon's[54] report that 31 of 35 women with heartburn during pregnancy obtained complete relief from the oral administration of anion exchange resins.

The resin-silicate combination mentioned above was found[55] to be highly effective for the removal of intestinal toxins. Quintos[56] reported it to be a desirable adjunct to sulfa and antibiotic treatment of infectious infantile diarrhea. Similarly, Joslin[57] found the combination of value in the treatment of infants and children suffering from diarrheas of various types. It also corrected diarrhea of the proteolytic type in adults.

Ion exchange resins containing indicator compounds have been developed as diagnostic aids for determining gastric acidity. Obviating the need for stomach tubes, the test depends on the time of appearance of the indicator compound in the urine.[3,58]

Before going on to consider the therapeutic potentials of cation exchange resins, mention should be made of another anion resin application. According to Block[59] the admixture of an acid-washed, powdered anion exchange resin with talc provides a powder which neutralizes alkaline irritants. The preparation

is claimed to be particularly useful to prevent diaper rash in infants.

There is considerable evidence,[60-63] both laboratory and clinical, that certain cation exchange resins may be of value in preventing the edema associated with such conditions as congestive heart failure, cirrhosis of the liver, and some cases of hypertension. The purpose in using these resins is to remove the sodium ions which are responsible for the retention of fluid in the tissues. By administering the resin it may be possible to lessen the need for or perhaps eliminate the need for or perhaps eliminate the monotonous salt-free diet now used to control edema. As remarked by Irwin and his associates[64] with such resins, a patient may satisfy his appetite for salt without absorbing excessive amounts of sodium and without producing edema.

However, the findings to date require further evaluation and certain factors still need clarification. As recently observed by Heming and his colleagues,[65] work along these lines is now in progress an there is considerable promise that the ion exchange resins will prove valuable as therapeutic agents in the treatment of edema.

Work on other phases of ion exchange resin utility is going on in many quarters. For example, considerable interest has been aroused in experimental studies[66] on the use of anion exchange units as artificial kidneys. Other applications of comparable value are, no doubt, "in the works."

BIBLIOGRAPHY

1. Way, J. T.: J. Roy. Agr. Soc. Engl. 25:313, 1850.
2. Thompson, H. S.: J. Roy. Agr. Soc. Engl. 11:68, 1850.
3. Klaas, Pi: Mod. Plastics 28:79, Sept., 1950.
4. Davis, H. M.: Chemistry 21:1, July, 1948.
5. Adams, B. A. & Holmes, E. L.: J. Soc. Chem. Ind. 54:1-6T, Jan. 11, 1935.
6. Anon.: "Amberlite Monobed Deionization," Philadelphia, Rohm & Haas Co., 1950, 12 pp.
7. Kunin, R.: Ind. & Eng. Chem. 40:41, 1948.
8. Kunin, R.: Ind. & Eng. Chem. 41:55, 1949.
9. Herr, D. S.: Ind. & Eng. Chem. 37:631, 1945.
10. Anon.: Rohm & Haas Repli. 7:14, Dec. 1949.
11. Anon.: Resinous Reptr. 9:8, July, 1948.
12. Anon.: "Laboratory Manual, Amberlite IRA-410," Philadelphia, Rohm & Haas, 1950. 8 pp.
13. Dudley, J. R.: U. S. Pats. 2,521,664 and 2,525,480, 1950.
14. Thurston, J. T.: U. S. Pat. 2,525,247, 1950.
15. Laube, C. G.: U. S. Pat. 2,525,227, 1950.
16. Evers, W. L.: U. S. Pat. 2,521,288, 1950.
17. Sussman, S.: U. S. Pat. 2,518,956, 1950.
18. Anon.: Mod. Plastics 27:158, August, 1950.
19. Walton, H. F.: Scient. American 183:48, Nov. 1950.
20. Anon.: Chem. Ind. 67:24, 1950.
21. Anon.: Chem. Eng. 57:162, Feb. 1950.
22. Winters, J. C.: Drug & Allied Ind. 36:19, July, 1950.
23. Editorial: U. S. Naval Med. Bull. 46:1597, 1946.
24. Applezweig, N. & Ronzone, S.: Ind. & Eng. Chem. 38:576, 1946.
25. Winters, J. C. & Kunin, R.: Ind. & Eng. Chem. 41:460, 1949.
26. Applezweig, N.: J. Am. Chem. Soc. 66:1990, 1944.
27. Applezweig, N.: U. S. Pat. 2,509,051, 1950.
28. Jindra, A.: J. Pharm. & Pharmacol. 1:87, 1949.
29. Huyck, C. L.: Am. J. Pharm. 122:228, 1950.
30. Rosenberg, H. R.: "Chemistry and Physiology of the Vitamins," New York, Interscience, 1942, pp. 224-5.
31. Pfiffner, J. J. et al.: U. S. Pat. 2,407,096, 1946.
32. Mottern, H. H. & Buck, R. E.: U. S. Pat. 2,445,583, 1948.
33. Block, R. J.: U. S. Pat. 2,386,926, 1945.
34. Reid, A. F. & Jones. F.: in Abstracts of Papers, 118th Meeting, American Chemical Society," September, 1950, p. 4G.
35. Quick, A. J.: Am. J. Physiol. 148:1, 1947.
36. Bennett, E. L. & Niemann, C.: J. Biol. Chem. 176:969, 1948.
37. Grant, G. A.: U. S. Pat. 2,479,832, 1949; also Brit. Pat. 595,798.
38. St. John, C. V., Flick, D. E. & Tepe, J. B.: in "Abstracts of Papers, 118th Meeting, American Chemical Society," September, 1950, p. 18B.
39. Dolnick, A. A. & Potash, M.: U. S. Pat. 2,479,559, 1949.
40. Shawcross, R.: U. S. Pat. 2,522, 140, 1950.
41. Kahler, F. H.: Chem. Eng. 57:109, July, 1950.
42. Cohn, W. E.: in "Abstracts of Papers, 118th Meeting, American Chemical Society," September, 1950, p. 5G.
43. Lo Grippo, G. A.: Proc. Soc. Exper. Biol. & Med. 74:208, 1950.
44. Segal, H. L., et al: Gastroenterol. 4:484, 1945.
45. Martin, G. J & Wilkinson, J.: Arch. Biochem. 10:205, 1946.

(Continued from page 862)

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Ion Exchange Resins

(*Continued from page 861*)

46. Council on Pharmacy and Chemistry: J. A. M. A. 143:1069, 1950.
47. Spears, M. M. & Pfeiffer, M. C. J.: Gastroenterol. 8:191, 1947.
48. Kraemer, M. & Siegal, L. H.: Arch. Surg. 56:318, 1948.
49. Weiss, J.: Rev. Gastroent. 15:826, 1948.
50. Marks, J. A.: Rev. Gastroent. 16:82, 1949.
51. Kraemer, M.: Connecticut State M. J. 12:305, 1948.
52. Weiss, S., Espicial, R. B. & Weiss, J.: Rev. Gastroent. 16:501, 1949.
53. Bergen, O. M. & Greenberg, A.: New York State J. Med. 50:1495, 1950.
54. Kasdon, S. C.: New England J. Med. 239:575, 1948.
55. Martin, G. J. & Wilkinson, J.: Arch. Biochem. 12:95, 1947.
56. Quintos, F. N.: J. Philippine Med. Assoc. 26:155, 1950.
57. Joslin, C. L.: Welaware State Med. J. 25:35, 1950.
58. Segal, H. L., Miller, L. L. & Morton, J. J.: Proc. Soc. Exper. Biol. & Med. 74:218, 1950.
59. Block, R. J.: U. S. Pat. 2,501,927, 1950.
60. Dock, W.: Trans. Assoc. Am. Physicians 59:282, 1946.
61. Greenblatt, I. J.: in "Abstracts of Papers, 113th Meeting, American Chemical Society" April, 1948, p. 2C.
62. McChesney, E. W. & McAnliff, J. P.: Am. J. Physiol. 160:264, 1950.
63. McChesney, E. W., Nachod, F. C. & Tainter, M. L.: in "Abstracts of Papers, 118th Meeting American Chemical Society," September, 1950, p 5G.
64. Irwin, L., Berger, E. Y., Rosenberg, B. & Jackenthal, R.: J. Clin. Investy. 28:1403, 1949.
65. Heming, A. E. Flanagan, T. L. & Sax, M. F.: in "Abstracts of Papers, 118th Meeting American Chemical Society," September, 1950, p. 6G.
66. Muirhead, E. E. & Reid, A. F.: J. Lab. & Clin. Med. 33:841, 1948.

Advances in Antibiotics

(*Continued from page 773*)

Another important observation in relation to the growing resistance of certain pathogenic bacteria to the therapeutic effects of an antibiotic relates to the streptomycins. It has become quite clear during the past year that a considerable number (and in some instances a majority) of the strains of infecting microorganisms isolated from certain infectious processes are more or less resistant to the streptomycins. Because of this, certain experts feel that the use of streptomycin should be limited to the treatment of tuberculosis, and even in this disease evidence is accumulating that a few new cases of tuberculosis are being discovered in which the tubercle bacillus is originally resistant to streptomycin.

Much progress has been made with Aureomycin. A better preparation of the antibiotic for oral use has been developed. The Aureomycin-sodium glycinate derivative is satisfactory for intravenous use. The outstanding new uses for this antibiotic over those previously reported are in the treatment of amebiasis and in the common and disagreeable type of vaginitis produced by Trichomonas vaginalis. In both these conditions, Aureomycin has been therapeutically very successful. Aureomycin must now also be considered the antibiotic of choice for the treatment of staphylococcal infections.

Chloramphenicol (Chloromycetin) has continued to be a highly effective antibiotic for the treatment of Rickettsial diseases, certain infections produced by gramnegative bacilli, and for typhoid fever. In this latter disease, the prognosis has been radically altered by treatment with this antibiotic, and the case fatality rate lowered from about 10 per cent to 1 or 2 per cent.

The outstanding event of 1950 in this field has been the introduction of terramycin, an antibiotic of wide therapeutic valency, and with a toxicity comparable to that of Aureomycin. It is too early to assess critically

(*Continued on page 864*)

READERS' QUESTIONS

OAT MEAL IN FACIAL PACKS: Would it be possible to send me a formula for a face pack in which oat meal has an important part? Jamaica.

It is my impression that oat meal is seldom used in the preparation of facial packs, but to make sure I made a careful check of the literature. The only thing that I have been able to find is the following procedure:

Put on face for 20 minutes a mixture of:

Oat flour	**20 Gm.**
Arnica flowers	**2 Gm.**
Chamomile flowers	**2 Gm.**
Hamamelis leaves	**2 Gm.**
Rosemary leaves	**2 Gm.**
Camphor water	**30 cc.**

Treat afterwards with astringent lotion of:

Tannic acid	**0.25 Gm.**
Rose water	**25.00 Gm.**
Hamamelis water	**50.00 Gm.**
Orange flower water	**25.00 Gm.**

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Advances in Antibiotics

(*Continued from page 862*)

the value of Terramycin, but currently it appears to be effective in infectious processes produced by certain gramnegative bacilli, in Rickettsial diseases, in primary atypical pneumonia, and possibly in other viral diseases produced by the "large" viruses, and in amoebic infections. In diseases produced by gram-positive cocci, Terramycin seems to be less effective than penicillin, and possibly Aureomycin. Its true status in a number of diseases such as syphilis, gonorrhea, etc. is as yet undetermined.

Enteric Coating of Tablets

(*Continued from page 777*)

solution "A" and 5 of solution "B") have been applied and thoroughly dried. Test the tablets for disintegration in artificial gastric juice and intestinal fluid.

Then proceed with regular subcoating procedure. It might be of interest to mention that some coaters prefer to eliminate calcium carbonate from their regular dusting powder whenever they are processing enteric coated tablets, in which case you can use the dusting powder recommended above. However, you will find that lacking calcium carbonate the subcoat will not build up as rapidly and a greater number of coats will be required to round out the tablets to the proper size and shape. The theory is based on the fact that elimination of calcium carbonate removes the possibility of reaction with the free hydrochloric acid in the stomach which may cause faster breakdown of the enteric coating.

In recent years another material, namely cellulose acetate phthalate has received considerable attention and judging by reports it produces a satisfactory enteric coating.

It is manufactured by the Eastman Kodak Company, Rochester, N. Y., who hold patent rights both on the material and its use as an enteric coating agent. However, non-exclusive license arrangements are available on a royalty basis. For further details regarding this matter I would suggest you contact the above company.

Cellulose acetate phthalate is soluble in such solvents as acetone, alcohol and ethyl acetate, which provides a fairly simple procedure, and due to the volatility of these solvents the application of the coating and subsequent drying can be carried out fairly rapidly.

The number of coats necessary to produce enteric properties depends on the concentration of the solids in solution. Experiments conducted by the Eastman Kodak Company indicated that a 15 per cent solution in acetone was satisfactory.

It is the author's opinion that acetone, which flashes off very rapidly, may evaporate before the solids have had sufficient time to distribute uniformly. Therefore a solvent with a higher boiling point would probably be more practical on a production basis. This theory appears to be born out by the investigations conducted

by Jacques Clobus (1) and C. Lee Huyck (2) who used the following solution—

Cellulose Acetate Phthalate	**5 per cent**
Ethyl Acetate	**47½ per cent**
Denatured Anhyd. Alcohol 3A	**47½ per cent**

Both investigators reported very favorably on this material as a satisfactory enteric coating agent.

The technique is very simple. It is only necessary to apply the solution to the tablets and after uniform distribution has taken place the solvent is removed by the warm air blast. Successive applications are made until a film of the desired thickness has been built up to meet the necessary requirements in gastric juice and intestinal fluid.

The actual amount of each dose will vary from 5 to 8 cc. of solution per 1000 tablets, depending on the size. Due to the volatile nature of the solvents drying periods are very short between applications. The complete process therefore can be accomplished in 60 to 90 minutes, based on the recommendation of Clobus I who reports 20 coats are necessary. After completion of the coating operation it is advisable to tray dry the tablets at 100° to 110°F. overnight to insure complete removal of the solvents. After drying, the tablets are then ready for subcoating in the usual manner.

Reference has been made on several occasions in this chapter regarding gastric juice and intestinal fluid for testing the efficacy of the various enteric coatings. These solutions can be according to the following formulae—

Artificial Gastric Juice 2	
Sodium Chloride	**1.4 Gm.**
Potassium Chloride	**0.5 Gm.**
Calcium Chloride	**0.06 Gm.**
Hydrochloric Acid 36 per cent	**6.94 Gm.**
***Pepsin NF**	**3.20 Gm.**
Distilled Water qs.	**1000 cc.**
(*Pepsin 1-10,000) 0.97 Gm.	
Artificial Intestinal Fluid 2	
***Pancreatin 3X**	**0.93 Gm.**
Sodium Bicarbonate	**15.00 Gm.**
Distilled Water qs.	**1000 cc.**
(*Pancreatin USP) 2.8 Gm.	

Disintegration tests should be conducted at a temperature of 98° to 100°F. and gentle agitation at a speed of 16-18 oscillations per minute should be maintained constantly throughout the test period.

BIBLIOGRAPHY

1. Jacques Clobus—Journal de Pharmacie de Belgique May-June—page 110.
2. C. L. Huyck—Journal American Pharmaceutical Association February 1946 Vol. 7 No. 2

Additional information which should prove of interest may be found in the following references:—

Malm, C. J. and Fordyce, C.R., Cellulose Esters of Dibasic Organic Acids, Ind. Eng. Chem., 32, 405 (1940)

Hodge, H. C., Forsyth, Jr. H. H., and Ramsey, G. H., Clinical Tests of Cellulose Acetate Phtaalate as an Enteric Coating, J. Pharmacol. Exper. Therap., 80, 241 (1944)

Duthie, R., and Brom, J. H., Malaria Report #104 of the Committee on Medical Research of the Office of Scientific Research and Development, National Research Council, Jan. 28, 1944

Hodge, H. C., The Chronic Toxicity of Cellulose Acetate Phthalate in Rats and Dogs, J. Pharmacol. Exper. Therap., 80, 250 (1944).

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